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# Understanding the effect of universal credit on housing insecurity in England: a difference-in-differences approach

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**ABSTRACT**

Existing research indicates an association between the introduction of Universal Credit in the UK and increased financial hardship among claimants. This policy change embodies key changes in welfare policy and ideology taking place across Europe and worldwide. This study investigates the association between housing insecurity and claiming Universal Credit in comparison to Housing Benefit and Jobseeker's Allowance. To examine changes in housing insecurity trajectories before and after the introduction of Universal Credit, we apply a difference-in-differences fixed effects logistic regression research design to Understanding Society data (2009–2020) on benefit claimants in England. We compare how Universal Credit claimants' likelihood of housing insecurity changes over time compared to other benefit claimants. We find that claiming Universal Credit does indeed have a significant effect on increasing housing insecurity in comparison to claiming Housing Benefit or Jobseeker's Allowance. This effect varied across different scenarios, including a larger effect for people with disabilities and claimants moving from Housing Benefit to Universal Credit. These findings demonstrate that the Universal Credit system negatively impacts particular population groups more than others, placing these claimants at disproportionate risk of experiencing housing insecurity.

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housing insecurity; welfare reform; conditionality; Universal Credit; Understanding Society

## 1. Introduction

The DWP's 2018 survey of Universal Credit claimants found that 36% of respondents were in housing arrears. 65% of those in arrears had gone into debt after beginning their Universal Credit claim (Foster et al., 2018, p. 16). The recent rollout of the UK's Universal Credit system is a hugely substantial and extensive welfare policy change, making a potential link between Universal Credit and increases in housing insecurity a valuable and urgent focus for research. However, while relationships

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between earlier welfare reform and housing outcomes are well established in the literature, with particularly strong evidence linking changes to Housing Benefit and worsening housing outcomes (Mulheirn, 2019; Fitzpatrick, Mackie & Wood, 2019; Fetzer, Sen & Souza, 2019), we have fewer insights into how Universal Credit and housing interact due to its recency and long, complex rollout. DWP's own investigation into the impact of migrating from legacy benefits to Universal Credit has been paused, with its Managed Migration pilot scheme including only 69 cases by the end of 2019 (Stacey, 2020, p.57). Consequently, research into the effects of Universal Credit in comparison to legacy benefits is becoming increasingly important as the policy rollout continues. The Universal Credit system is strongly associated with a number of changes in welfare policy and ideology taking place within wider European and international contexts, such as an increased focus on conditionality and national debt reduction (Koch & Reeves, 2021; Gingrich & King, 2019). Consequently, the analysis of Universal Credit and its effects is valuable beyond its immediate UK context, exemplifying and providing comparison for other national welfare policy changes.

This article makes an original contribution to the body of research on welfare reform and housing outcomes by investigating Universal Credit's effects on claimants' ability to meet housing costs in England using Understanding Society data (Waves 1 to 10, 2009–2020) (University of Essex, Institute for Social and Economic Research, 2020). While existing studies have primarily considered the effects of Universal Credit from an overall rollout-wide perspective, this study aims to reflect the complex and varied rollout of Universal Credit in its research design and results by employing multiple comparison groups and a wave-by-wave analysis. The following research questions are explored:

- What is the effect of Universal Credit on housing insecurity for claimants living in rented housing in England?
- How do housing outcomes compare or differ for Universal Credit claimants and Housing Benefit or Jobseeker's Allowance claimants?

The research questions are addressed using Understanding Society data (Waves 1 to 10, 2009–2020) (University of Essex, Institute for Social and Economic Research, 2020) and supplementary administrative data. The study uses a difference-in-differences methodology, comparing housing insecurity among Universal Credit and legacy benefit claimants before and after the introduction of Universal Credit. The conceptualisations of housing insecurity employed across the existing literature are diverse, from narrow quantifiable measures such as rough sleeper counts to more abstract or multifaceted housing outcome measures that comprise different dimensions (Rhodes and Rugg, 2018, p. 46; Foye, 2020, p. 5; Clair, Reeves, McKee & Stuckler, 2019; Routhier, 2019, p. 236). The conceptualization of housing insecurity employed in the present study is situated within this wider discourse, focusing particularly on housing insecurity in relation to affordability and economic hardship due to the intersection with Universal Credit. Similar affordability-based approaches have measured housing insecurity using missed housing payments (Burgard, Seefeldt & Zelner, 2012) and difficulties meeting housing payments (Pollack, Griffin & Lynch,

2010). Housing insecurity is here measured using a dependent variable of whether respondents have fallen behind with rent payments in the twelve months preceding their Understanding Society interview.

The study finds that claiming Universal Credit has a significant effect on increasing housing insecurity in comparison to claiming Housing Benefit or Jobseeker's Allowance. This effect is slightly reduced when analysis is applied to new claimants on a wave-by-wave basis rather than the whole sample across the rollout period. This indicates that analyses of Universal Credit taking a more general approach to research design elements such as time frame and sample construction are at risk of failing to sufficiently integrate the practical implementation of Universal Credit, potentially exaggerating its negative effects due to the influence of selection effects. Moreover, this effect is more significant for certain population groups, such as people with self-reported disabilities or claimants moving from Housing Benefit to Universal Credit.

## 2. Background

Universal Credit (UC) is an integrated benefit for all working age claimants, replacing a variety of legacy benefits to create one centralized system. In November 2010 the DWP recorded 4.8 million Housing Benefit (HB) claimants and 1.4 million Jobseeker's Allowance (JSA) claimants (DWP, 2010). By May 2020, the distribution of claimant numbers had changed significantly due to the introduction of UC, with 3.1 million HB claimants, 170,000 JSA claimants, and 5.4 million UC claimants, 2.4 million of whom included a housing element in their claim (DWP, 2020). The implementation of UC began with a pilot programme in 2013 in several towns, mainly in the North of England (DWP, 2014, p. 7). Initial access to UC was limited to single non-homeowners without children who did not have a HB claim and were making a new JSA claim (DWP, 2014, p. 7; D'Este & Harvey, 2020, p.12). National expansion began in February 2015 (DWP, 2021), with UC gradually rolling out to more areas and claimant types until December 2018, when UC was available to all claimant types across Great Britain making new or changed claims (DWP, 2021). The next stage of the programme is 'Managed Migration', through which existing legacy benefit claimants without a change in circumstances will be moved to the legacy benefit system. Other than a pilot programme that began in Harrogate in July 2019 (DWP, 2021), 'Managed Migration' is currently not being implemented.

Due to the gradual rollout of UC, selection into the UC claimant group is affected by a number of entry effects. At different stages in the rollout, a claimant's allocation into the UC or legacy benefit system is affected by the date of their claim, their location, their household characteristics, and what kind of claim they are making (DWP, 2014, p. 11). The early inclusion of demographic groups at higher risk of housing insecurity, such as single adult households, and the requirement for claimants to be making a new or adjusted claim to enter the UC system may have a selection effect on the UC claimant group, leading to a disproportionately increased level of housing insecurity. Another key entry effect influencing the rollout was Job Centre deliverability, linked to the size and performance of job centres, the local labour markets they operate in (DWP, 2014, p. 14), and the ability of staff training

and IT practices to support the new system (D'Este & Harvey, 2020, p. 12). In order to compare the UC and legacy benefit claimant groups throughout the rollout, it is therefore necessary to allow for these entry effects and utilize similar samples. The DWP evaluation of UC's effect on employment therefore focuses on comparing similar people making new claims to either the UC or legacy benefit system based on differences in geography or time who are claiming in similar labour markets (DWP, 2014, p. 14).

The introduction of UC is situated within a wider global context of changes in housing affordability, with a current strong association between poverty and housing cost overburden across European nations (Hick, Pomati & Stephens, 2022, p. 26), and welfare policies. Gingrich and King (2019) position UC as part of 'a blurring of differences across the American and European welfare states' (p. 89), through which European states have adopted increasingly narrow and conditional benefit systems. This shift is particularly associated with the response to the 2008/2009 Global Financial Crisis, which focused on the reduction of spending and government debt in many European countries (Koch & Reeves, 2021, p. 4). UC can be viewed as a significant manifestation or 'accelerat[ion]' (Gingrich & King, 2019, p. 90) of this wider change in policy and ideology taking place on the international stage. Current literature frequently links UC with ideological realignment, with an emphasis on a shift in the purpose of the welfare system from social security to active citizenship (Koch & Reeves, 2021, p. 3) and increased conditionality for social citizenship (Dwyer & Wright, 2014, p. 33). This ideological motivation potentially drives the associations identified by researchers between the UC welfare reform and increased financial insecurity among claimants. Cheetham, Moffatt and Addison's study into the experiences of UC claimants (2018) found that financially vulnerable households who moved onto the UC system were often pushed into financial 'hardship and crisis', particularly for more at-risk claimants such as disabled people or lone parents (p. 37), while Reeves and Loopstra's analysis of food bank usage and UC identified a significant and persistent association between the rollout of UC and a rising food bank use (2020, p. 17). These findings indicate a misalignment between the aims and values of current welfare policy and the needs and circumstances of the people it affects. When considered within this context, UC and its effects are therefore a valuable consideration within not only UK-based research, but as part of an international discussion as an example of broader changes in welfare policy and their consequences.

The policy change incorporates several practical changes in how benefits are implemented, delivered, and accessed by claimants. There is a waiting period of at least five weeks between the acceptance of a claim and the first payment, intended to replicate monthly payment schedules in the world of work. Claimants' experiences indicate that this payment gap can cause financial hardship, including going into debt (Reeves & Loopstra, 2020, p. 3; Stacey, 2020, p. 30). Although advance payments are possible, these payments are then automatically deducted from future UC payments, simply deferring the financial hardship (Reeves & Loopstra, 2020, p. 4). The five week wait and advance payment mechanisms are distinctive features of UC in comparison to earlier benefits, and their relationship with financial hardship and compounding debt, including rent arrears, links them significantly to housing

outcomes. UC is also a fully digitized system, resulting in difficulties for many claimants due to limited access to computers or the internet (Foster et al., 2018, p. 13). Most crucially for housing outcomes, the UC system by default directly pays its housing element to claimants rather than landlords. Analysis of the DWP 2012–2013 trial of direct payment demonstrated a negative impact on rent payments, with an increase in rent underpayment (Wilson, 2019, p. 579). Hickman asserts that insights drawn from the direct payment trial are likely to also apply to the transition to the UC system, (Hickman, 2021, p. 237), potentially increasing the likelihood of UC claimants going into rent arrears. As well as direct payment, UC is paid monthly by default. Hartfree identifies the monthly payment system as increasing the risk of financial hardship, as it is misaligned with many low-income households' existing budgeting behaviours such as weekly budgeting (Hartfree, 2014, p. 17). The changes in how UC administers payments, particularly in relation to housing costs, therefore pose increased problems for housing security in comparison to the legacy benefit system.

UC applies new conditionality measures on claimants, including in-work claimants. The change in conditionality is most apparent in the changes in sanctioning, a measure by which benefit payments are reduced for a set period of time in response to a claimant failing to meet required claimant responsibilities. Sanctioning is a feature of both the legacy and UC systems, with studies showing links between experiences of sanctioning and increased financial hardship (Loopstra, Fledderjohann, Reeves & Stuckler, 2018; Dwyer, 2018). Adler (2018) finds that the UC system has a higher sanctioning rate than the legacy system, estimating that in 2019 JSA claimants had a sanctioning rate of 0.5% while UC claimants had a sanctioning rate of around 3% (Adler, 2018; Webster, 2022). Furthermore, unlike in the legacy system, these sanctions can now be deducted from the housing element of UC (Reeves & Loopstra, 2020, p. 3). This shift in conditionality and sanctioning introduces further instability into the move from the legacy benefit system to the UC system, increasing the potential for experiences of housing insecurity among claimants.

There is also reason to expect that the increased risk of housing insecurity linked to UC is disproportionately experienced by already vulnerable groups. A report for homelessness and poverty charity Z2K emphasizes the impact of UC on claimants with a limited capability for work due to disability (Stacey, 2020, p. 23). This qualitative research draws on 15 interviews with Z2K clients about their experiences of claiming UC (Stacey, 2020, p. 2) and highlight long waits for Work Capability Assessments and lengthy reconsideration and appeals processes (pp. 17–18). Furthermore, changes in sanctioning under Universal Credit have led to an increase in the sanctioning rate among the disabled population (Reeves & Loopstra, 2017, p. 7). A study into the experiences of Universal Credit claimants in Gateshead and Newcastle associates the transition to Universal Credit with increased risk of rent arrears (Cheetham, Moffatt & Addison, 2018, p. 17), finding that it is 'particularly challenging for people with health issues and disabilities' (p. 34). The upcoming Managed Migration stage of UC will require a large number of disabled legacy benefits claimants to transition to the UC system (Stacey, 2020, p. 6). Further research into the relationship between UC and housing outcomes

for disabled claimants is therefore of particular importance, as there is potential for a higher impact that will affect more households as Managed Migration takes place.

## 3. Data and methods

### 3.1. Data

Understanding Society is a longitudinal household panel study, collecting annual survey data on the experiences of UK residents on a wide range of social and political topics (University of Essex, Institute for Social and Economic Research, 2020). The survey data includes participants' experiences of both housing and welfare, enabling the relationship between the two to be analyzed on an individual level. The data currently covers observations from 2009 to 2020. Understanding Society provides a sample that is both large, with 50110 respondents in Wave 10, and representative due to the inclusion of Ethnic Minority and Immigrant Boost samples. It is therefore a robust and generalizable foundation for research into the UK population. As the data can be accessed at regional, Local Authority and LSOA level, Understanding Society also enables both individual and area-level analysis. This is especially important for research into housing outcomes and their causes due to the significance of the interaction between individual and local variables.

The current analyses focus on respondents in England who are living in rented housing and are eligible for or claiming UC. Included respondents (n = 7787 individuals) were those living in social or private rental housing, between the ages of 18 and 65 (as UC is a working age benefit), and who claimed UC, HB or JSA at some point during the data collection period. The data is analyzed at a person-year unit level, with each individual measured up to 10 times in the sample.

The analysis was performed using three sample groups of Understanding Society data. The treatment group (claimants who entered the new UC system through a new claim or migration from legacy benefits) consists of all private or social renters of working age claiming UC (n = 706 individuals). The control groups (claimants who remained on the legacy system) consist of all private or social renters of working age claiming HB (n = 6783 individuals) or JSA (n = 1031 individuals). Two benefit groups were selected as UC is intended to replace a wide range of legacy benefits, with different benefits being incorporated into the UC rollout at different times. Despite merging into one system under UC, HB and JSA claimants in the legacy system frequently have different demographic distributions, such as the JSA claimant group skewing younger than the HB group. In comparison to other legacy benefits, JSA is especially widely applicable to the working age population, who are also the target group of UC. By stratifying the analysis across these two comparison groups, the study therefore aims to better reflect the practical implementation of UC and how it affects different population groups. While complete like-for-like comparison is not feasible, this enables us to compare UC claimants to a broad and diverse sample of legacy benefit claimants. HB and JSA are not mutually exclusive under the legacy benefit system, meaning there may be some overlap between these groups. As respondents' personal identifier codes remain the same across waves, claimants'

experiences of housing insecurity prior to claiming UC or HB/JSA can also be included in the analysis. This enables comparison between claimants' pre- and post-claim housing insecurity, enabling us to identify whether change occurs. For year-by-year analysis, these sample groups are further categorized by the year in which the respondent's claim began.

### 3.2. Methods

The complex policy rollout and longitudinal data under investigation in this study provide a robust rationale for a difference-in-difference (DID) research design. Angrist and Pischke (2009) observe that DID is effective when researching policies that feature a range of possibilities that differ across areas or time periods (p. 234). This corresponds with the varied welfare options in the UK, including an array of legacy benefits as well as UC, and the gradual rollout of UC across different geographical areas over time. DID is also particularly effective when applied to a multi-year sample such as Understanding Society in identifying 'whether causes happen before consequences' (Angrist & Pischke, 2009, p. 237). This is valuable in avoiding misinterpretations of reverse causality, contributing to a more robust and reliable causal research design.

A DID research design is therefore implemented in this study, with a treatment variable of claiming UC or legacy benefits and a dependent variable of problems meeting rental payments. As the UC treatment applies only to post-rollout data, this introduces a before-after element to the treatment, making it equivalent to a difference-in-differences effect. The research design diagram (Figure 1) further illustrates the composition of this DID effect, consisting of the additional change in housing insecurity at the time of the intervention for respondents who enter the UC system. This is a panel model in which initial differences between groups and general trends in the housing insecurity trajectory, including coincidental change in the control group at the time of intervention, are absorbed by the time and individual fixed effects. The analysis focuses on the difference between changes in claimants' ability to meet housing payments across Understanding Society waves. This is indicated by a binary measure of whether respondents have fallen behind with housing payments in the twelve months preceding their Understanding Society interview. The analysis is stratified across two samples: a JSA/UC group, and a HB/UC group. Due to the binary dependent variable, a logistic regression fixed effects model has been employed, using the conditional logistic regression function from the 'Survival' package in R (Therneau, 2022; R Core Team, 2019). The model includes individual respondents and data collection waves as fixed effects to control for unobserved heterogeneity, isolating UC's effects by accounting for differences between groups. The resulting regression table demonstrates the effect of each included variable on the likelihood of a claimant experiencing problems meeting housing payments.

Explanatory variables were selected based on existing research into factors influencing housing insecurity, with individual variables derived from Bramley and Fitzpatrick, 2018. The independent variables included in the model are: UC treatment status, benefit claimed, benefit income amount, tenure type, employment status, age bracket, sex, health status, whether the respondent is responsible for a child under

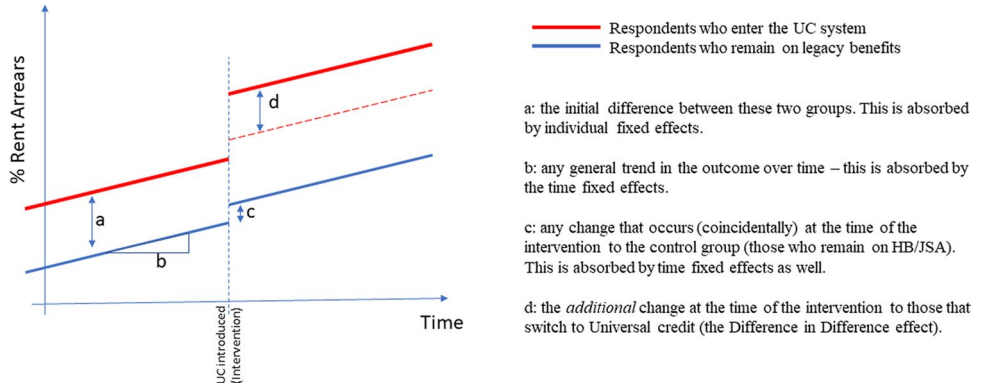


**Figure 1.** Diagram of difference in differences research design, comparing housing insecurity trajectories of counterfactual and treatment groups (does not represent real data).

16, how many children live in the household, whether the respondent is single or living with a partner in household, and the Access to Housing and Services IMD decile (by local authority). Wave and individual fixed effects were also included.

## 4. Results

### *4.1. Trajectory visualization: comparing housing insecurity between different claimant groups*

In order for a difference-in-differences analysis to be effective, the treatment and control groups require a parallel trajectory prior to intervention, ensuring that the analysis compares like for like. This would indicate that claimants had similar experiences of housing insecurity before breaking into the UC and legacy benefit system groups, meaning that any change in housing insecurity following that divergence could be associated with differing benefit claims. By comparing the proportion of UC and legacy benefit claimants experiencing difficulties meeting rent payments before and throughout the rollout of UC, we can identify whether a parallel trajectory is present.

Figure 2 demonstrates the presence of parallel trajectories between the UC and HB groups prior to the first introduction of UC in Wave 3 (2013). During this period the groups have a relatively consistent difference of around 5 percentage points. As a difference-in-differences approach focuses on the differences between the changes in the trajectories rather than the differences between the trajectories themselves, this initial gap does not significantly impact the results.

Between Waves 3 and 6 UC was gradually rolled out in different areas of the UK before a full UK-wide rollout in Wave 6 (2014–2016). A sharp difference between the trajectories of the treatment and control groups can be seen at the time of the wider UC rollout, with a higher proportion of the UC claimant group experiencing difficulties meeting rent payments than the HB claimant group. In conjunction with the initial parallel trajectories, this notable diversion provides a strong foundation for a difference-in-differences approach.

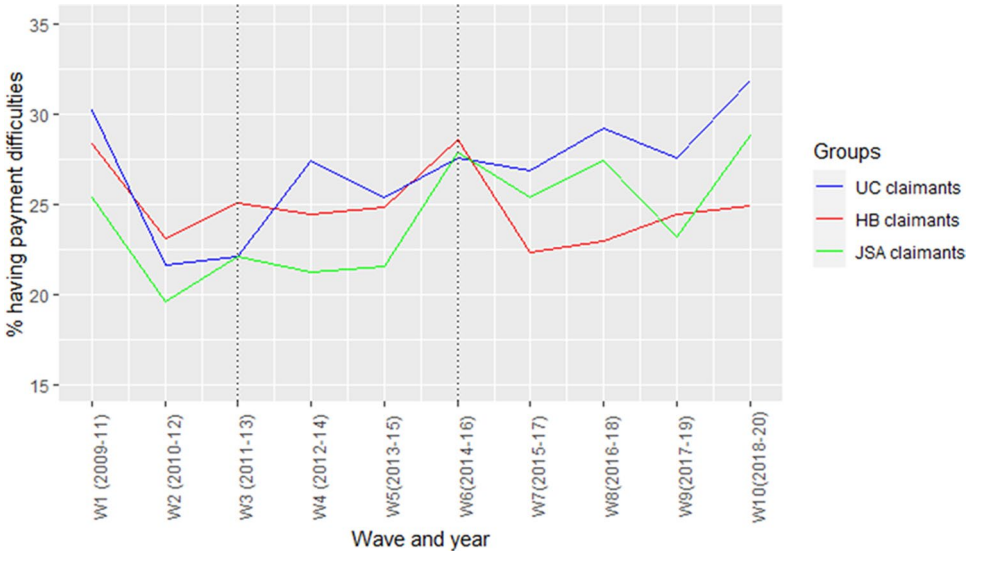


**Figure 2.** Proportion of UC, HB and JSA claimants experiencing housing payment difficulties between Wave 1 and Wave 10.

The housing insecurity trajectory for JSA claimants is more volatile than that of HB claimants, with a less distinct correspondence with the UC claimant group trajectory. The different levels of volatility reflect the different claimant population make-ups, with the HB population including more long-term and older claimants compared to more short-term and younger JSA claimants. Both the UC and JSA groups follow an overall upward trajectory, with the UC group more consistently surpassing the JSA group in Waves 6–10 following the wider rollout of UC. This visualization indicates a similarly volatile and worsening housing insecurity experience among UC and JSA claimants, with a less defined divergence than the HB group at an overall level.

A distinct spike in housing insecurity for both the JSA and HB groups occurs in Wave 6. This spike is consistent across all samples employed in this study, and follows the introduction in 2013 of several welfare reforms including the Benefit Cap, an upper limit on the total amount a household can claim in benefits administered through HB or UC. This anomaly can therefore likely be attributed to the financial shock experienced by many claimants following these changes, particularly in association with a subsequent spike in the sanctioning rate in 2014 (Webster, 2014). All claimant groups experience a significant drop in housing insecurity between Waves 1 and 2. This is likely to reflect wider economic recovery in the UK following the 2007–2008 Global Financial Crisis.

### *4.2. Fixed effects logistic regression modelling*

Fixed effects logistic regression modelling was employed to investigate variable effects on housing insecurity, including a treatment variable of whether the claimant is claiming UC. This approach improves on the trajectory visualization by moving

from examining average aggregate effects to individual effects. The model was stratified across the JSA and HB claimant groups. The resulting regression tables demonstrate the effect of each variable on the probability of a claimant experiencing problems meeting housing payments.

In both models, the treatment effect is positive and significant, indicating that claiming UC in comparison to HB or JSA is associated with an increased likelihood of experiencing housing insecurity over time. The HB model found that claiming UC was associated with a 1.9 log odds of experiencing housing insecurity across the data collection period in comparison to the control group, and the JSA model found that claiming UC was associated with a 1.55 log odds (Table 1). In both cases, claiming UC was linked to higher odds of experiencing housing insecurity when compared to the legacy benefit system. The treatment effect is larger in the HB model, in line with the trajectory visualization (Figure 2).

Several individual-level characteristics were found to be significant when comparing housing insecurity among HB and UC claimants. In the HB model, being in employment (odds ratio of 1.24), having a disability or long-term health condition (odds ratio of 1.2) are associated with a significant increase in the likelihood of experiencing housing insecurity. Individual-level characteristics were found to be less significant when comparing JSA and UC claimants. In both models, receiving a lower benefit award had a small but statistically significant effect on a higher likelihood of housing insecurity.

### 4.3. New claimants

Compared to continuous claimants, respondents making new benefit claims are inherently more likely to have experienced new recent problems regarding their financial or housing situation, leading them to make a claim. Due to the current need for a new or changed claim in order to claim UC, there is therefore a potential for a selection effect causing higher financial or housing instability in the UC sample compared to continuous legacy benefit claimants. In order to address this, the analyses were repeated on new claimants only, enabling a more like-for-like comparison between UC and legacy benefit claimants.

The same logistic fixed effects model as employed in Section 4.2 was applied to the subsample of new claimants across the entire data collection period. In both models, the treatment effect of claiming UC on housing insecurity is similar but slightly reduced when considering only new claimants. In the HB new claimant model claiming UC is associated with 1.81 log odds of experiencing housing insecurity across the data collection period in comparison to the control group, with log odds of 1.41 in the JSA new claimant model (Appendix 1).

### 4.4. Wave-by-wave analysis

In order to further ensure like-for-like comparison and isolate the treatment effect, the logistic regression model was stratified across groups of new claimants by wave. By directly comparing respondents who newly claimed each benefit in the same

**Table 1.** Regression table for whole sample fixed effects logistic regression models.

| | UC/HB group comparison model | | | | | UC/JSA group comparison model | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Log odds | Std. error | p value | Odds ratio | Sig. | Log odds | Std. error | p value | Odds ratio | Sig. |
| UC treatment | 0.64 | 0.09 | 0.0001 | 1.89 | *** | 0.44 | 0.12 | 0.0002 | 1.55 | *** |
| Benefit: JSA | −0.11 | 0.15 | 0.48 | 0.90 | | 0.23 | 0.11 | 0.04 | 1.26 | * |
| Benefit: HB | 0.05 | 0.04 | 0.19 | 1.06 | | 0.01 | 0.10 | 0.89 | 1.01 | |
| Benefit income | −0.0001 | 0.00003 | 0.0001 | 1.00 | *** | −0.0002 | 0.0001 | 0.004 | 1.00 | * |
| Age: 21–34 | 0.05 | 0.15 | 0.75 | 1.05 | | 0.05 | 0.16 | 0.73 | 1.05 | |
| Age: 25–34 | 0.26 | 0.17 | 0.14 | 1.29 | | 0.22 | 0.21 | 0.30 | 1.24 | |
| Age: 35–44 | 0.40 | 0.20 | 0.05 | 1.49 | * | 0.30 | 0.30 | 0.33 | 1.35 | |
| Age: 45–54 | 0.50 | 0.23 | 0.03 | 1.65 | * | 0.29 | 0.39 | 0.45 | 1.34 | |
| Age: 55–64 | 0.59 | 0.26 | 0.03 | 1.80 | * | 0.50 | 0.48 | 0.29 | 1.65 | |
| Employed | 0.21 | 0.05 | 0.00001 | 1.24 | *** | 0.10 | 0.09 | 0.26 | 1.11 | |
| Disability | 0.19 | 0.05 | 0.0001 | 1.20 | *** | 0.10 | 0.09 | 0.25 | 1.11 | |
| Children in HH | −0.06 | 0.08 | 0.43 | 0.94 | | 0.01 | 0.16 | 0.95 | 1.01 | |
| No. of children | 0.03 | 0.03 | 0.26 | 1.04 | | 0.10 | 0.06 | 0.09 | 1.11 | |
| Single in HH | −0.08 | 0.07 | 0.21 | 0.92 | | −0.23 | 0.13 | 0.07 | 0.79 | |
| Private tenure | −0.11 | 0.07 | 0.10 | 0.90 | | −0.04 | 0.12 | 0.72 | 0.96 | |
| Housing decile | 0.004 | 0.09 | 0.96 | 1.00 | | −0.05 | 0.17 | 0.79 | 0.95 | |
| Wave 2 | −0.28 | 0.06 | 0.0001 | 0.76 | *** | −0.38 | 0.13 | 0.004 | 0.69 | * |
| Wave 3 | −0.19 | 0.06 | 0.002 | 0.83 | ** | −0.37 | 0.13 | 0.01 | 0.69 | * |
| Wave 4 | −0.18 | 0.07 | 0.01 | 0.84 | ** | −0.10 | 0.14 | 0.50 | 0.91 | |
| Wave 5 | −0.20 | 0.07 | 0.002 | 0.82 | ** | −0.26 | 0.14 | 0.07 | 0.77 | |
| Wave 6 | −0.03 | 0.07 | 0.65 | 0.97 | | −0.06 | 0.14 | 0.68 | 0.94 | |
| Wave 7 | −0.41 | 0.07 | 0.0001 | 0.66 | *** | −0.02 | 0.15 | 0.91 | 0.98 | |
| Wave 8 | −0.42 | 0.08 | 0.0001 | 0.66 | *** | −0.02 | 0.16 | 0.90 | 0.98 | |
| Wave 9 | −0.40 | 0.08 | 0.0001 | 0.67 | *** | −0.24 | 0.17 | 0.17 | 0.79 | |
| Wave 10 | −0.34 | 0.09 | 0.0002 | 0.71 | *** | −0.01 | 0.19 | 0.96 | 0.99 | |

***: <0.001, **: <0.01, *: <0.05.

data collection year as one another, this version of the model aims to reduce the influence of effects associated with particular years that would impact all claimants. While not sufficiently robust individually due to small sample sizes, the wave-by-wave analyses are valuable when considered in relation to one another and the overall models (Sections 4.2 and 4.3).

The HB wave-by-wave models (Appendices 2–5) demonstrate similar results to the overall models, with significant treatment effects of claiming UC on housing insecurity across almost all waves. The relationships between being in employment, having a disability or long-term health condition, or receiving a lower benefit award and higher likelihood of housing insecurity are also mostly consistent. However, in the JSA wave-by-wave models (Appendices 2–6), a significant treatment effect is apparent in only the Wave 7 and 9 iterations. A consistent association between a larger number of children living in the household and increased housing insecurity risk is found across all waves in the JSA model.

In both the HB and JSA models, a heightened treatment effect is apparent in the Wave 7 iteration, with log odds of 3.8 in the HB model and 2.9 in the JSA model (Appendix 3). This follows the wider national rollout of UC in Wave 6 (2014–2016) and the Wave 6 spike in housing insecurity (Figure 2), which may be associated with the introduction of several welfare reforms in 2013 and the associated financial shock experienced by many claimants. This spike potentially slightly inflates the overall treatment effect when considered across the data collection period rather than on a wave-by-wave perspective.

## 5. Discussion

Overall analysis of housing payment difficulties among UC and legacy benefit claimants suggests that claiming UC has a significant negative effect on housing security, increasing the proportion of UC claimants experiencing housing payment difficulties in comparison to those claiming HB or JSA, with large treatment effects and distinct divergences in the post-UC rollout trajectories of claimants' housing insecurity. In the overall analysis, claiming Universal Credit was associated with a log odds of 1.9, or a 90% likelihood increase, when compared to the HB control group, and a log odds of 1.55, or a 55% likelihood increase, when compared to the JSA control group. However, studying the full sample can produce a variety of selection effects introduced by UC's gradual and selective rollout. In order to obtain insights that better reflect the practical reality of UC's implementation, this article has therefore stratified its analysis over several sub-samples and by wave.

The treatment effect is reduced when the analysis is focused on only new claimants. It reduces further for usual years (i.e. excluding the financial insecurity spike in Wave 6) when analysis is conducted on a wave-by-wave basis. This version of the model provides a more like-by-like comparison of similar claimants and identifies wave-specific effects, generating a treatment effect that further isolates the specific influence of UC at a particular point in time. Even when year-specific effects and selection effects are further reduced, a large and significant treatment effect remains. These results demonstrate an association between claiming UC and increased experiences of housing insecurity over time in comparison to the legacy benefit system.

This association corresponds with existing analysis of UC and its effects, with the increasing effect over time aligning with Hardie's findings on the increasing impact on landlord repossessions when UC had been in effect for a longer time (Hardie, 2021, p. 238).

The analysis indicates that the association between UC and housing outcomes varies for different groups of claimants. UC is an integrated benefit system, replacing several legacy benefits which previously served populations with differing needs and demographic make-ups. The housing insecurity trajectories of UC and JSA claimants are fairly similar, with smaller treatment effects than the HB models. By contrast, the housing insecurity trajectories of UC and HB claimants noticeably diverge and several waves experience large and significant treatment effects, associating claiming UC with an increased risk of housing insecurity over time. As recipients of different benefit types migrate to the Universal Credit system, particular subgroups such as HB recipients may therefore experience more change and insecurity in their housing situations than other groups.

As in previous studies, the analysis found individual characteristics explained a significant amount of the variance in housing insecurity, and that the risk of housing payment difficulties was distributed unequally across those individual characteristics. Individual characteristics were especially significant in the HB model, indicating that an interaction between having a vulnerable individual characteristic and being part of the HB comparison group might have a particularly strong effect on a respondents' risk of housing insecurity. In the HB model, being in employment or having a disability or health condition was associated with higher risk of housing insecurity, while the wave-by-wave JSA models identified a larger number of children living in the household as associated with higher risk. This places vulnerable claimants and claimants moving from HB to UC at disproportionate risk of negative housing outcomes, increasing their potential future need for financial or housing-related support. The higher risk of rent payment problems in people in employment in the HB model does not have an obvious explanation and requires replication and further detailed study, though it may be related to factors such as irregular incomes and working hours. The employment effect findings may also be affected by the use of an all-benefit claimant sample, as this entails a comparison between unemployed claimants and employed claimants with an additional non-employment reason to claim benefits – these unknown additional reasons may be influencing the increased effect.

Existing literature on the association between Universal Credit and financial hardship emphasizes the increased risk to disabled claimants (Stacey, 2020, p. 23; Reeves & Loopstra, 2017, p. 7; Cheetham, Moffatt & Addison, 2018, p. 34). The logistic regression results for the HB comparison group reflects this concern, with significant worsening effects on housing payment difficulties frequently associated with having a disability or health condition. Visualizing the housing insecurity trajectories for disabled and non-disabled claimants in different benefit groups indicated that while housing insecurity was consistently lower for disabled HB claimants, it increased post-welfare reform for UC and JSA claimants. This increase cannot be exclusively linked to the introduction of UC, as the welfare reforms included other changes, such as the benefit cap, that may have disproportionately affected disabled

people. Moreover, work capability reassessments for disability-related benefit claims during the study period could trigger a changed claim (if the claimant is found fit for work) and consequent move to the UC system, contributing to a selection effect. However, these findings do demonstrate a potential increased risk of housing insecurity for disabled claimants moving onto the UC system, particularly for those moving from a more stable legacy benefit such as HB.

A significant relationship was also identified between receiving a lower benefit income and increased likelihood of housing insecurity. As well as highlighting people on low benefit incomes as a vulnerable group, the inclusion of benefit income in the model also sheds light on the potential driver of the association between UC and housing insecurity in these results. The treatment effect of claiming UC remains significant when controlling for benefit income, indicating that the association between UC and housing insecurity is not exclusively driven by changes in the amount of benefit income received by claimants. This finding is strengthened by a sensitivity analysis in which benefit income was not included in the model (Appendix 6). The treatment effect of UC is approximately the same in this model (both in magnitude and significance), demonstrating that income level is a significant predictor of housing arrears but not the key driver behind UC's effects on housing insecurity. There is a strong body of evidence, particularly stemming from qualitative research, that demonstrates the negative impact of UC mechanisms such as claimant waiting periods, direct payment of housing elements to claimants, and increased sanctioning (Cheetham, Moffatt & Addison, 2018; Dwyer, 2018; Hartfree, 2014; Reeves & Loopstra, 2020; Stacey, 2020). The results of this study corroborate these findings, indicating that particular characteristics of UC beyond monetary benefit value impact its relationship with housing insecurity.

This article also provides insights into how we can effectively analyze UC and its complex rollout. The study has aimed to reflect how UC has been implemented in practice by employing a fixed effect approach and wave-by-wave analysis of new UC and legacy benefit claimants. This is intended to reduce the impact of individual selection effects that vary by place and time in the rollout, producing a more accurate comparison of similar claimants in similar circumstances. When taking into account UC's varied rollout in this way, the treatment effects of UC are frequently less significant than when taking a more general approach. Studies that do not sufficiently integrate the way in which UC's rollout has changed over time may therefore generate exaggerated accounts of UC's effects. As a result, they miss the more specific effects UC has at certain times or for certain population groups, making it harder to focus support or reform where it will be most effective. These findings therefore show the importance of incorporating the varied practical implementation of UC into comparison group construction and research design.

## 6. Limitations and recommendations

Despite providing a representative perspective on the UK population, the use of Understanding Society data for this analysis has several limitations. The conceptualisation of housing insecurity is restricted by the use of longitudinal survey data, as more extreme but less prevalent housing outcomes such as street homelessness

are unlikely to be represented in the sample, and are therefore excluded from analysis. The use of a self-reported housing outcome measure introduces more complexity, as respondents may have different perceptions on what constitutes difficulties paying for housing, or may not accurately report their experiences due to stigma. The study also concentrates on HB and JSA claimants as a comparison group, which could be extended in future research to include a wider range of legacy benefits. As the study has been stratified across two legacy benefits with differing demographic distributions rather than reflecting only one legacy benefit group, we would expect to find similar results for other comparison groups. However, the findings of this study may not fully capture the experiences of particularly vulnerable respondents who might be claiming benefits such as Income Support (for claimants with low or no income) or Employment and Support Allowance (for claimants who cannot work due to disability), for whom the transition onto Universal Credit might introduce particular financial pressures.

Finally, the study focuses on the time period surrounding the UC rollout. Future work could extend the current comparison of UC and JSA/HB using British Household Panel Survey data to offer insights into other changes such as the 2008 Global Financial Crisis and the 2012 Welfare Reforms. Data availability also means that the current analyses do not cover the COVID-19 pandemic, which would be a valuable topic for future research. The Understanding Society COVID-19 studies (Understanding Society, *COVID*-19) provide a strong foundation for this analysis, as they include data on evictions, difficulties meeting housing payments, and detailed questions on UC claims.

The study also does not include potential influencing characteristics preceding the analyzed timeframe. Pathway analysis has demonstrated the effect of childhood conditions (Fitzpatrick, Bramley & Johnsen, 2013, p. 155; Chamberlain & Johnson, 2013, p. 66) and adverse events in adulthood (Fitzpatrick, Bramley & Johnsen, 2013, p. 153; Chamberlain & Johnson, 2013, pp. 64–66) on housing outcomes. Earlier life variables are outside the scope of Understanding Society and the focus of the present research questions. However, they may have some influence on the benefit-housing outcomes relationship and may be relevant to future research on the topic.

The findings of this study demonstrate the unequal distribution of housing insecurity across different populations, and the potential for UC to negatively impact particular population groups more than others. In particular, the results highlight claimants with disabilities and claimants migrating from HB as at higher risk of experiencing increased financial and housing insecurity. Further research is recommended into how UC is likely to impact these groups, both for those currently in the UC system and those who will be affected as 'Managed Migration' is enacted. The DWP has previously failed to sufficiently apply its own data in evaluating UC (NAO, 2016, p. 9) or engage with external research on its outcomes (p. 40), making the execution and application of this research all the more crucial. Policy change is also recommended to ensure members of more vulnerable groups are not disproportionately affected by the UC system, supporting similar recommendations put forward by previous UC studies (Cheetham, Moffatt & Addison, 2018, p. 38; Stacey, 2020, p. 8). Potential protective measures include reinstating removed or reduced disability-related premiums, making the payment of housing costs more flexible and

aligned with claimants' budgeting behaviours, removing the required 5 week wait for payment, and ring-fencing the housing element of UC so that sanctioning cannot be applied to essential housing costs. It is noteworthy that in Scotland the Universal Credit Scottish Choices give claimants the options of having their Universal Credit paid twice per month or directly to landlords (Scottish Government, n.d.). An evaluation by the Scottish Government into Scottish Choices (Scottish Government, 2021) found that as of August 2020 38% of eligible claimants had opted into one or more of the Scottish choices (p. 9), with a higher likelihood of opting in among claimants with limited capabilities for work (p. 11). Reasons given for taking Scottish Choices included helping with money management and particularly avoiding rent arrears (p. 12).

## 7. Conclusion

The reshaping of the UK welfare system into the new Universal Credit system is a monumental change, affecting the lives of several million benefit claimants across different places, populations, and circumstances. The key aim of this study was to identify how this major change is affecting claimants' ability to meet housing costs in England. While the overall version of the analysis suggests a strong difference-in-difference effect of claiming Universal Credit on housing insecurity, the more nuanced perspectives provided by the different legacy benefit comparison groups and wave-by-wave samples demonstrate that this effect is not the same for all claimants. Instead, specific population groups are at a higher risk of experiencing increased housing insecurity when moving onto the Universal Credit system. In particular, Universal Credit claimants with disabilities and claimants migrating from Housing Benefit to Universal Credit are especially vulnerable to financial and housing hardship. This study also highlights the importance of reflecting the complex and varied implementation of Universal Credit in research design when analyzing its effects. By doing so, we are able to better develop an understanding of Universal Credit that does not exaggerate its overall effects, but instead reveals the ways in which it impacts claimants unequally.

In its current form, the Universal Credit system negatively impacts particular population groups more than others, placing these claimants at disproportionate risk of experiencing financial hardship and housing insecurity. As the Universal Credit system's reach widens and its outcomes become increasingly entrenched in the lives of claimants, these vulnerable claimants in the Universal Credit system or waiting to be transferred as part of 'Managed Migration' will potentially encounter increased and compounding housing difficulties. In order to effectively target policy and practice change, it is therefore crucial that future research into the effects of Universal Credit recognize and investigate its unequal impacts, building a stronger understanding of the populations and places most at risk of detrimental effects. As Universal Credit's ideological foundations have been associated with a wider shift in welfare policy and thought within broader European and international contexts (Gingrich & King, 2019; Koch & Reeves, 2021), these results are likely to be relevant to similar systematic change taking place in other countries.

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