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Analysing the socio-economic impacts of COVID-19: a new regional geography or pandemic enhanced inequalities?

Katie Cross ^a, Jamie Evans ^a, Julie MacLeavy ^a and David Manley ^{a,b}

ABSTRACT

In the UK the socio-economic impacts of the COVID-19 mitigations over the course of the pandemic (March 2020 to the time of writing in January 2022) have been experienced unevenly and with differential intensities at both the regional and local scales. Using individual-level geocoded data (from the Understanding Society: UK Household Longitudinal Survey COVID-19 study) linking people to the places in which they live, we consider the regional and local disparities in the risks and outcomes of financial hardship as a result of early stage mitigations. This paper provides direct evidence from the UK of a concentration of vulnerabilities in areas of high deprivation, undermining the capacity of individuals within those areas to shelter from economic shocks. Furthermore, the geography of financial hardship appears largely compositional – attributable to the pre-existing characteristics of individuals within regions and neighbourhoods, rather than being explicitly driven by the spatial contextual effect of their social or physical environments. This has implications for UK regional economic policy, and the Levelling Up agenda in particular. It is not the regions and neighbourhoods that give rise to COVID-19 hardship per se, but the concentration of individual disadvantages of the people living within them. The persistence of compositional dis/advantages means that there is a need not only to direct ameliorative packages to the individual but also to use local areas as places where the (regional) Levelling Up agenda can break long-term place trajectories that lock in existing disparities which in turn yield unequal financial opportunities and outcomes in periods of crisis.

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1. INTRODUCTION

By mid-March 2020, the rapid increase in COVID-19 cases in the UK (as in many countries) necessitated substantial state interventions to contain the virus and prevent healthcare systems from becoming overwhelmed. This involved radical adjustments to how firms and households manage paid work, with lockdown measures brought in to prohibit anyone not in healthcare,

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supermarket or delivery roles, and other essential services ('key workers') from working outside of the home. As part of the same group of measures, the UK government introduced schemes to prevent mass unemployment and pay workers a replacement wage; although in some instances enforced absence from the labour market was unpaid, because of gaps in the Coronavirus Job Retention Scheme (CJRS; 'furlough') and the Self-Employed Income Support Scheme (SEISS), which left workers reliant upon Universal Credit (UC) benefits. Building on emerging analyses of the consequences of COVID-19-related restrictions on work and employment for individuals, households and different socio-economic groups, this paper takes a wide perspective on the socio-economic consequences of the novel coronavirus, analysing 18 outcomes grouped into three key themes (labour market and income impacts, financial mitigations, and financial outcomes). Recognizing that the economic landscape of the UK is highly varied, with structural differences between the constituent countries, differences in economic productivity and success by government office regions (GORs), and vast local variation at the neighbourhood level, it additionally explores the geographical dimensions and implications of pandemic measures. There is already a suggestion that the financial impacts of COVID-19 have been unequally felt and evidence of the social injustice and inequality it has exposed (e.g., Bhattacharjee & Lisauskaite, 2020; Power et al., 2020). Yet, few studies have sought to analyse the local and regional aspects of the personal economic crises precipitated by this global health emergency. Using unique individual geocoded data from the UK Household Longitudinal Study (UKHLS), also described as Understanding Society, we combine both people and places to explore the contextual and compositional characteristics of regions and localities in terms of the financial outcomes of COVID-19 for the residents living within them.

Using the UK as an illustrative case, this paper focuses on the spatiality of individual economic vulnerability and hardship wrought by the pandemic, with a view to illuminating the potential significance of residential surroundings in determining the socio-economic impacts of COVID-19. Through the early months of the pandemic key UK interventions and policies were applied nationally with regional variation introduced after the lifting of the first lockdown in July 2020. While there was some local variation especially in third sector provision (e.g., foodbanks) that predated the area-based measures to control the spread of coronavirus (i.e., local lockdowns), central government determined the policy for mitigation. What is of interest, then, are the geographical effects that emerge from processes of economic marginalization, lending support to arguments for targeted future support to overcome the pattern of suffering observed. With questions being posed about the needs of the future economy and where infrastructural investment is best directed to aid recovery efforts (Martin, 2021; McCann et al., 2021), it is apt to consider both who and where has been impacted by 'pandemic precarity' (Perry et al., 2021), as well as whether the pandemic has exacerbated longer term patterns of inequality and disadvantage in the UK. Given the propensity for financial hardship to become embedded over time leading to socio-economic and geographical polarization (Christophers, 2018; Hochstenbach, 2018), it is possible that where people are located is critical in determining the needs of future relief efforts and recovery programmes.

The remainder of the paper is structured as follows. We next set out how the coronavirus crisis, by interrupting the economy, placed certain individuals and households under financial strain. Here government austerity looms large, and we situate our research on the socio-economic impacts of COVID-19 in relation to the increasingly polarized social and spatial structures in the UK (Beatty & Fothergill, 2016; MacLeavy & Manley, 2019). The compound of austerity and the pandemic has particularly exacerbated pre-existing patterns of inequality, as well as placed certain groups of workers at increased financial risk, because of the reduced capacity of health and social care services, amongst other state agencies, to respond to the pandemic. We then document our methodological approach and results, the latter of which point to COVID-19 having intensified existing inequalities rather than creating new ruptures. We explore these findings in more detail in the discussion before moving to concluding reflections on the mooted policy responses, including the idea of 'levelling up'.

2. THE CORONAVIRUS CRISIS, INEQUALITIES AND AUSTERE NEOLIBERALISM

The medical outcomes of COVID-19 have been highly unequally distributed. Disproportionate infection rates, hospitalizations and exposures have been felt in communities with higher levels social, cultural and economic vulnerabilities (Griffith et al., 2021; Harris, 2020; Kulu & Dorey, 2021). Underpinning these clear infection patterns is a geography linking harder individual (and area) socio-economic conditions to vulnerability to the virus. Whilst the virus has an indiscriminate ability to infect, suggesting we are ‘all in this together’ (Sobande, 2020), the social and economic fortunes of individual lives add a different dimension altering daily exposures experienced. One might contrast those working from home with personal and family space to those highly exposed as a result of employment that cannot be conducted at home or requires extensive travel and exposure in workplaces, through to the risks experienced by those living in inner city locations with restricted park access or little personal space in which to keep apart from others. Moving beyond the medical outcomes, the socio-economic patterns that are beginning to emerge suggest there will be a strong social and geographical patterning. This is especially the case against the background of long-term structural inequalities as well as with more recent austerity: we note that so long-term are the inequalities that Bambra et al. (2021) highlight there are similarities between the patterning of COVID-19 and Spanish Flu.

Although less is known presently about the socio-economic impacts of COVID-19, it was predicted to hit lower income groups the hardest and particular regions of the country more than others (Scambler, 2020). A decade of low public spending under the rubric of austerity, along with increasing employment insecurity with greater reliance on zero-hour contracts, agency working in both the public and private sectors, and reforms to the social safety net has led to a dramatic increase in poverty (Donald & Gray, 2019). The reduction of state spending has also continued growing inequalities, which in turn has hampered the UK’s pandemic response (Blackburn, 2020). For instance, the capacity of the state was limited by processes of privatization and outsourcing with the result the state had fewer direct resources to call on without quickly contracting outside firms. Similarly, the (in)ability of some individuals to adhere to the restrictions either at home or in workplaces because they were ultimately unable to absorb the financial costs involved with ‘lockdown’ was an inevitable consequence and companion of neoliberal austerity (Blundell et al., 2020; Marmot, 2020). Thus, just weeks after the March 2020 budget, which offered the first significant boost to government spending since 2010, Chancellor of the Exchequer Rishi Sunak committed a (then) estimated £330 billion to relieving the socio-economic impacts of the pandemic. The anticipated impacts included job losses, business failures and debt defaults that were expected to result from the dramatic reduction in economic activity expected from the emergency firm closures, new and increased constraints upon working activity (through a combination of home-schooling and childcare) and a fall in aggregate demand (Sunak, 2020). The use of a large monetary and fiscal stimulus to lessen the short-term threat to jobs and livelihoods was intended to ‘bridge’ over what would, for many, be a sharp and significant decline in income, mitigating the adverse effects on the economy and reducing the risk of a deep recession far worse than the UK experienced in the aftermath of the Global Financial Crisis (Gopinath, 2020).

The COVID-19 relief package marked a distinct change in the long-run economic approach of multiple previous UK governments, intervening in a trajectory that emphasized market relations to re-task the role of the state and promote individual responsibility (Daar & Tamale, 2020). Successive governments have sought to reduce state spending and cut tax as a way of achieving gross domestic product (GDP) growth. Beginning in the late 1970s, when the UK experienced a stagflation period, the drive to decrease public expenditure to stimulate private

sector growth has had the effect of transferring wealth from the poor to the rich, increasing levels of inequality, and exacerbating spatial divides between and within population groups. Although there was a brief (and relatively successful) experiment with Keynesianism in response to the 2008–09 recession, the ‘necessity’ and ‘inevitability’ of dramatic cuts to public services has been a long-standing refrain, which has served to discredit calls for government spending as an alternative means of stimulating growth during economic downturns. Indeed, austerity was defended by the Conservative-led coalition within the UK as necessary to redress the previous Labour government’s ‘poor fiscal discipline and permissive welfare spending’ with the implication that it was profligacy, rather than financialization and marketization, that led to the Global Financial Crisis (Edmiston, 2018, p. 2).

Despite announcing the ‘end’ of austerity, the renewal and redoubling of neoliberal commitments that was observed post-2010 was predicted to endure – prior to the pandemic – with an expectation that the outcomes of the austerity measures in terms of tight fiscal policy would leave divested structures of public, voluntary and private sector organizations as the norm. Important as austerity is, much of the evidence points to a reproduction and enhancement of existing structural inequalities, and pre-existing conditions which exacerbated socio-spatial disparities with the groups and areas requiring the most support being the first to lose out from state change and retreat. This means that there existed prior to the pandemic an already substantial structural geography of inequality across the UK. As such early interventions into socio-economic impacts of the pandemic have observed how low spending on public healthcare, weak social safety nets, and poor labour rights turned a global shock into a personal burden (Gillespie & Hardy, 2020). With the institutions of state welfare weakened, the weight of the coronavirus crisis was felt at the individual level. This is not only the case through the moral responsibility placed on citizens to reduce the infection risk they pose to others in order to ‘save lives’ and thereby ‘protect the NHS’ but also through the uneven socio-economic mitigators of infections, and the propensity for COVID-19 to compound the already unequal effects of neoliberalism and austerity across the nation and population. As Standing and Davies (2020) remark, ‘while the virus seems indiscriminate, vulnerability and the capacity to mitigate its impact are not spread equally’. In this sense, ‘COVID-19 represents not a single, discrete crisis to be treated in isolation’ (p. 146) but one that must be seen as inextricably related to the long-term economic reforms that have stressed lives and localities, and which remains pertinent to understanding the feminized, classed, racialized and spatialized experiences of the pandemic (Women’s Budget Group, 2020).

To fully uncover the legacies of long-term structural inequalities, enhanced by austere neoliberalism, which have conditioned the local impacts of the pandemic, we explore which individuals have been financially impacted by COVID-19 and how this varies by local geography. Although national governments have provided many unifying messages of responsibility, the pandemic itself and associated policy measures highlight that we are not ‘all in it together’ and never were! Furthermore, where individuals are experiencing financial pressures, then the social, cultural and health impacts are likely to be exacerbated by the longer term exclusions placed on their ability to meet the costs of participating in society. Stresses that adversely affect personal and familial well-being can impact long-term opportunities and outcomes. For this reason, we argue, the Financial Crisis, Great Recession and politics of austerity need to be explored for their short-term and immediate impacts, as well as their inheritance effects – the long-term and secondary impacts that will continue to remain significant, because of how they become ‘woven into the fabric of the everyday’ (Hall, 2019, p. 480).

The structural inequalities of deindustrialization and increasing economic peripheralization have meant that recent austerity – delivered through uniform cuts to local government budgets – has had a disproportionate impact on the regions and locales most dependent on government spending. This has led to the reinforcement and geographical widening of

spatial divides as activities supporting the foundational economy – for instance, infrastructural and technological investments, or provisions for education, health and welfare – ‘increasingly depend upon *where* people live’ (Lobao et al., 2018, p. 395, original emphasis). It is in areas of deprivation, then, where continual and prolonged disinvestment bites through the removal of infrastructure (libraries, community services) leading to a vicious circle of disinvestment with the private sector following the public exit in places unable to reach sufficient demand bases and creating a situation where individuals and households are exposed to the coronavirus crisis on a number of fronts.

Following from this discussion, the purpose of this study is to look not only at which individuals have been financially impacted by COVID-19 but also to explore and understand how these apparently individual impacts vary geographically. Within the context of the current work, local geography is operationalized through the use of the lower layer super output areas (LSOAs).

3. METHODOLOGY

3.1. The data

To uncover the early socio-economic impacts of the COVID-19 pandemic, this paper uses the first three waves of the UK Household Longitudinal Study (UKHLS) COVID-19 panel study, which was conducted between late April (Wave A), May (Wave B) and June 2020 (Wave C). The data relate to the period of the first UK lockdown, announced on 23 March and running until the end of June when the first local lockdowns were implemented. The UKHLS COVID-19 study also obtained retrospective information about a respondent’s experiences in January–February 2020, which allows for a comparison of how individual circumstances have changed, before and after the COVID-19 restrictions were put in place.

The COVID-19 study is part of the wider UKHLS, an annual survey of individuals in approximately 40,000 households. This enables respondents to be linked to previous information from the main the UKHLS waves and we include data from UKHLS Wave 9 (2017–19) with information on additional demographic characteristics, such as educational attainment and marital status as well as additional baseline information, for example, household income, to enable us to trace how the poverty and vulnerability caused by a decade of austerity policies combines with the effects of the novel coronavirus.

3.2. The sample

Our sample was based on those of working age (20–65 years) who had a valid response for at least one outcome variable and who had responded to all of our main control variables (see section 3.3) and who had a valid LSOA code to enable the inclusion of other contextual variables such as local area deprivation. A total of 12,466 respondents matched these criteria; however, it was necessary to further restrict the sample to make use of some outcomes. For example, our outcome variable related to hunger was based on questions asked only in the first COVID-19 survey wave, so the sample became smaller ($N = 8999$) as more respondents completed Wave A than completed both Waves A and B. In contrast, our outcome variable on the uptake of the furlough scheme used variables from all three waves and was restricted only to those who were employees prior to March 2020, meaning the sample size was considerably smaller ($N = 4729$). The descriptive information for the variables is shown in Table 1.

3.3. Outcome measures

The outcome measures comprise three distinct groups: first, those capturing labour market and income impacts (e.g., job loss, use of a job-support scheme or loss of earnings or hours); second, those reporting mitigations used by respondents to manage the financial impact of the crisis

Table 1. Outcome measures.

		Count	%	Waves
<i>Labour market and income impacts</i>				
Lost paid employment	No	5105	94.2%	A–C
	Yes	315	5.8%	
Furloughed	No	3671	77.6%	A–C
	Yes	1058	22.4%	
Furloughed or self-employment support	No	3985	73.5%	A–C
	Yes	1435	26.5%	
Lost 100% of hours	No	3618	68.3%	A–C
	Yes	1683	31.7%	
Any labour market impact	No	2055	37.9%	A–C
	Yes	3365	62.1%	
<i>Financial mitigations</i>				
Applied for Universal Credit	No	7133	96.0%	A, B
	Yes	297	4.0%	
Applied for mortgage holiday	No	2988	87.7%	A, B
	Yes	418	12.3%	
Applied for credit holiday	No	7226	95.7%	A, B
	Yes	324	4.3%	
Received transfers	No	6997	91.9%	A, B
	Yes	620	8.1%	
<i>Financial outcomes</i>				
Poor subjective financial well-being	No	7021	92.2%	A, B
	Yes	594	7.8%	
Used a food bank	No	7479	98.2%	A, B
	Yes	140	1.8%	
Hungry and unable to eat nutritious food	No	7357	97.7%	A
	Yes	172	2.3%	
Behind with the bills	No	7106	93.4%	A, B
	Yes	505	6.6%	
Behind with housing payments	No	6963	91.6%	A, B
	Yes	639	8.4%	
Decline in subjective financial well-being	No	5567	74.4%	A, B
	Yes	1918	25.6%	
Decline in the ability to pay bills	No	7232	95.2%	A, B
	Yes	368	4.8%	
Decline in the ability to keep up with housing costs	No	4864	92.1%	A, B
	Yes	418	7.9%	
Any decline in financial outcome	No	5314	69.7%	A, B and 9
	Yes	2305	30.3%	

Source: Authors' own figures.

(e.g., applications for social security payments in the form of UC); and third, broader financial outcomes (such as ability to meet bills or housing costs). The labour market outcomes were based on questions asked in all three waves, while most mitigation and financial outcomes variables used questions asked in the first two waves.

All outcome measures are coded as binaries (0 = 'did not occur' and 1 = 'did occur'). In most cases, a value of 1 represents cases where the event/mitigation had occurred during at least one of the waves under investigation (Table 1). In other words, for the labour market and income

outcomes based on three waves of data: ‘had ‘event X’ happened by June 2020?’; and for those variables based on two waves of data: ‘had ‘event X’ happened by May 2020?’. Four measures (Decline in subjective financial well-being; Decline in the ability to pay bills; Decline in the ability to keep up with housing costs; and Any decline in financial outcome) take a different approach and examine change over time, comparing whether a participant’s situation during the first three months of the UK lockdown was ‘worse’ than it had been prior to the pandemic. These measures rely on financial variables (such as ability to pay bills) which was asked in Wave 9 of the UKHLS and then repeated during the COVID-19 waves.

3.4. Control variables: area characteristics

Local area characteristics are included through the local neighbourhood environment operationalized as LSOAs. These areas, with an average population of 1500 people, represent local (statistical) neighbourhoods in the UK and have been used previously in research on contextual effects. Whilst there are, of course, challenges associated with using administrative areas to represent the neighbourhood context (Galster, 2001; Norman, 2016) the extensive provision of data at the LSOA level and the large amount of research conducted at this spatial scale mean there is a body of literature with which it is possible to make comparisons. The LSOA information reports the deprivation quintile of each neighbourhood via the index of multiple deprivation (IMD) drawing on the most recent deprivation indices used for each constituent country. As highlighted in the literature, it is not only the very local neighbourhood context that can influence the financial well-being of individuals so to capture the meso intermediate context in which individuals live, we measured unemployment in the labour market within which they live using travel-to-work areas (TTWAs). TTWAs cover substantially larger geographical areas than LSOAs and reflect ‘self-contained areas in which most people both live and work ... [TTWAs] are useful for helping build an understanding of local labour markets’ (Office for National Statistics (ONS), 2016, p. 2). The average population of a TTWA is 270,000 people.

There are two key limitations to the contextual data we have used. The first reflects the deprivation indices matched at the LSOA level. Each index is calculated slightly differently for each of the countries making up the UK on which the UKHLS data are based. As these differences can result in different deprivation scores for similar levels of deprivation making direct comparisons difficult, we included deprivation as ‘quintiles of deprivation’ meaning the most deprived 20% areas with each country are grouped together enabling the most deprived to be compared. The second limitation relates to the time periods in which the data are reported. Both the deprivation indices and the unemployment data differ in year by country. For the IMD (and comparison the Welsh IMD, Scottish IMD and Northern Irish IMD) each is drawn from a different year, while for the unemployment at the TTWA level data are drawn from 2016, except for Northern Ireland which uses 2017 data. The impact of this, however, was considered likely to be small, given that deprivation and unemployment exhibit high temporal stability in the UK (Rice & Venables, 2020). To mitigate against these issues, we included a variable identifying the region/country of the UK in which each respondent lives. For the descriptive statistics we used both a full 12-region variable and a six-region condensed version – in which the ‘North West’, ‘North East’, ‘Yorkshire and the Humber’, ‘East Midlands’ and ‘West Midlands’ are collectively coded as ‘North England’, while the ‘East of England’, ‘South East’ and ‘South West’ are coded as ‘South England (excluding London)’. ‘London’, given the capital’s distinct characteristics and large population, was coded separately, as were the remaining constituent countries of the UK.

3.5. Control variables: household and individual characteristics

The UKHLS captures data on the characteristics of both individuals and their households. From these data we have derived a wide range of individual-level variables (Table 2) covering

participants' socio-demographic situation, their health status, and their pre-pandemic work and financial situation. To complement these, our analyses used the following household-level variables: household composition; and housing tenure. One variable, 'working in a COVID-affected industry', was coded to include those industries where, according to the Labour Force Survey (LFS), average weekly hours had reduced by 20% or more compared with the previous year (ONS, 2020).

3.6. Analytical approach

We began each analysis by descriptively exploring the regional disparities in outcomes before moving to modelling the outcomes. Our modelling uses binary logistic regression analyses with the addition of cluster robust standard errors using each respondent's unique household identifier. These robust standard errors allowed us to take into account natural clustering that would be expected from participants who live within the same household. Tests for multicollinearity of control variables were also conducted. All analyses were weighted using longitudinal weights for the most recent COVID-19 survey wave in which the outcome measure was asked, and the sample restricted to only those with positive weights (for more on weighting within these surveys, see Benzeval et al., 2021).

4. RESULTS

4.1. Cross-tabulations: the regional geography of the pandemic's financial impacts

To understand the overall socio-economic impacts of the pandemic, we explored the variation in financial outcomes across GORs. Tables A1–A3 in the supplemental data online give regional breakdowns of all outcome variables. In each of these, and the tables that follow (i.e. Table 3 onwards), we have used red and blue shading to denote whether a particular group experiences more negative (red) or positive (blue) outcomes than comparator groups (e.g., higher rates of job loss considered more negative), with darker colours linked to the groups with the lowest and highest values/coefficients. Text in bold indicates where statistically significant relationships exist at the 95% confidence level. Of all GORs, London has the highest level of job losses, new UC applications, financial transfers from family/friends, poor subjective financial well-being, and a decline in the ability to meet bills or housing costs. This centrally focused impact of the coronavirus pandemic has been widely acknowledged, with many areas of London remaining in the top quintile for post-pandemic increase as of July 2021 in the unadjusted claimant count (Francis-Devine et al., 2021). For furlough and self-employment support, no patterns are identified – which matches the government's real-time information that demonstrates 'broad consistency' in regional take-up of furlough, varying only from 28.6% to 31.8% across regions as of July 2020 (HM Revenue & Customs (HMRC), 2020).

In terms of financial outcomes, Yorkshire and the East and West Midlands exhibit the highest proportion of respondents reporting increased financial difficulty when compared with their situation pre-pandemic. Over a third (36%) of those in the West Midlands reported a decrease in their subjective financial well-being. For example, 17% of those in Yorkshire and the Humber reported falling behind with their housing costs. As for the devolved administrations of the UK, a relatively low proportion of respondents in Scotland reported losing their paid employment, applying for UC or experiencing poor financial outcomes. Wales meanwhile shows a significantly high proportion (18%) who were behind on some or all of their bills in April or May 2020, and also a high proportion (12%) who had fallen behind on their bills compared with pre-pandemic. Lastly, Northern Ireland is notable for its increase in UC claimants, credit holiday applications and decline in the ability to pay bills.

Table 2. Control variables used in the analysis: household, individual and area characteristics.

Individual-level variables		Count	%
Sex	Male	2643	38.3%
	Female	4261	61.7%
Age (years)	20–29	616	8.9%
	30–39	1076	15.6%
	40–49	1624	23.5%
	50–59	2190	31.7%
	60–65	1398	20.2%
Ethnicity	White	6167	89.3%
	Asian or Asian British	453	6.6%
	Black, African, Caribbean or Black British	130	1.9%
	Mixed/Multiple/Other ethnic group	154	2.2%
Born in the UK	Born in the UK	6237	90.3%
	Not born in the UK	667	9.7%
Education	GCSE or lower	1340	19.4%
	A-level	1487	21.5%
	Degree or higher	3737	54.1%
	Other qualification	340	4.9%
At risk of serious illness from COVID-19	No risk (not clinically vulnerable)	5015	72.6%
	Moderate risk (clinically vulnerable)	1476	21.4%
	High risk (clinically extremely vulnerable)	413	6.0%
Household type	Single adult, no children	1296	18.8%
	Single adult, children	371	5.4%
	Multiple adults, no children	2916	42.2%
	Multiple adults, children	2321	33.6%
Tenure (2017–19)	Owned (outright or with mortgage)	5592	81.0%
	Socially rented (local authority or housing association)	617	8.9%
	Privately rented/other	695	10.1%
Household income quintile (2017–19)	1 (lowest income)	1225	17.7%
	2	1325	19.2%
	3	1428	20.7%
	4	1476	21.4%
	5 (highest income)	1450	21.0%
Type of work at baseline	Employed, on a fixed salary	3780	54.8%
	Employed, non-fixed salary	1006	14.6%
	Self-employed	634	9.2%
	Not in paid employment	1484	21.5%
Student, apprenticeship or government training scheme	No	6640	96.2%
	Yes	264	3.8%
Retired	No	6436	93.2%
	Yes	468	6.8%
Caring for family/home or maternity leave	No	6561	95.0%
	Yes	343	5.0%
Key worker	No	4441	64.3%
	Yes	2463	35.7%
Working in a COVID-affected industry	No	3894	56.4%
	Yes	3010	43.6%
Furlough	No	5831	84.5%

(Continued)

Table 2. Continued.

Individual-level variables		Count	%
	Yes	1073	15.5%
Self-employment support	No	6512	94.3%
	Yes	392	5.7%
Lost job	No	6589	95.4%
	Yes	315	4.6%
<i>Contextual variables</i>			
Index of multiple deprivation (quintiles)	1 (most deprived)	907	13.1%
	2	1248	18.1%
	3	1364	19.8%
	4	1654	24.0%
	5 (least deprived)	1731	25.1%
Urban or rural	Urban area	5214	75.5%
	Rural area	1689	24.5%
Travel-to-work area unemployment (mean)	Claimant count (%)	6904	1.83%
Region	North East	263	3.8%
	North West	697	10.1%
	Yorkshire and the Humber	597	8.6%
	East Midlands	544	7.9%
	West Midlands	596	8.6%
	East of England	677	9.8%
	London	650	9.4%
	South East	942	13.6%
	South West	647	9.4%
	Wales	412	6.0%
	Scotland	603	8.7%
	Northern Ireland	276	4.0%
North–South divide	North England	2697	39.1%
	South England	2916	42.2%
	Wales	412	6.0%
	Scotland	603	8.7%
	Northern Ireland	276	4.0%

Source: Authors' own figures.

Whilst it is instructive to explore the disparities in outcomes at the regional level, they represent relatively large spatial areas within a nation displaying a vast amount of heterogeneity and many diverse communities. Given this diversity, we would expect some more local-level geographical variation and, as can be seen in [Table 3](#), the LSOA deprivation quintile exhibits a clear pattern in terms of financial outcomes. The disparity between most and least deprived is stark, with 23% in the most deprived quintile reporting poor subjective financial well-being and 9% using a foodbank, compared with 6% and 0.5%, respectively, in the least deprived areas. Labour market impacts (not shown in [Table 3](#)) also show similar patterns, with 12% experiencing a job loss in April or May in the most deprived quintile, compared with 5% in the least deprived quintile. Mitigations adopted also vary by level of deprivation, with mortgage and credit holidays being more common among more middle quintiles, but financial transfers from friends/family being most common across the bottom two deprivation quintiles.

Table 3. Percentage of working-age respondents in areas in each deprivation quintile (where 1 is most deprived) who had experienced a negative financial outcome at one or more waves (April–May).

	1 (most deprived)	2	3	4	5 (least deprived)	National
Poor subjective financial wellbeing	22.6%	12.3%	10.4%	8.6%	5.8%	11.7%
Used a food bank	8.6%	3.7%	2.0%	1.5%	0.5%	3.1%
Hungry and unable to eat nutritious food	5.2%	2.8%	3.5%	3.7%	1.9%	3.4%
Behind with bills	27.7%	17.5%	11.7%	7.5%	4.3%	13.5%
Behind with housing payments	20.7%	15.1%	11.5%	11.1%	7.2%	13.0%
Decline in subjective financial well-being	31.8%	30.8%	27.3%	28.1%	26.0%	28.7%
Decline in ability to pay bills	18.4%	12.4%	7.1%	6.5%	3.3%	9.4%
Decline in ability to keep up with housing costs	14.5%	14.3%	10.2%	11.8%	7.0%	11.6%
Any decline in financial outcome	42.0%	39.6%	32.2%	34.6%	29.6%	35.5%
<i>Unweighted N Range</i>	719-1033	1010-1387	1009-1497	1253-1804	1291-1899	5282-7619

Note: Figures in bold indicate those columns that were significantly higher or lower than other columns in the same row, using a column proportions z-test ($p < 0.05$). Colour coding is indicative of higher or lower values within each given row.

4.2. Regression analyses: bringing in household and individual characteristics

To understand these descriptive outcomes more fully we adopted critical control variables for the local area, household and individual levels. All the regressions on labour market and earnings impact outcome variables were based on respondents who were in-work prior to the pandemic and of working age. We first present a model featuring only the area-level variables (Table 4a), before providing the full model with area-, household- and individual-level variables (Table 4b). The area-level-only model reveals noticeable deprivation effects across four of the five variables; however, we identify little to no relationship between our outcome variables and any of the area-level predictors once household- and individual-level characteristics are controlled for: no statistically significant association appears to exist based on region, previous unemployment rate within the respondent's TTWA or by rural–urban status of their local area. Deprivation quintile too shows little association, with only job loss being associated with living in the second least deprived decile (relative to the least deprived) and no significant association with living in more deprived areas.

Instead of area, it is the household- and individual-level predictors that display significant associations and provide insight into the explanations for the patterns. Increased odds of job loss are associated largely as expected with: living in socially rented accommodation; having a highest educational qualification as 'other qualification'; belonging to a black ethnic background; not being born in the UK; and being employed on a non-fixed salary. Reduced odds of job loss meanwhile are associated with: being older; and working as a key worker. Increased

Table 4a. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having experienced different labour market outcomes, including only area-level variables (April–June 2020)

	Lost job	Furlough	CJRS / SEISS	Lost 100% hours	Any employment hardship
Region (Ref=South England)					
London	1.10	0.88	0.88	0.72	0.95
North England	0.82	0.88	0.82	0.85	0.93
Wales	0.63	0.70	0.66	1.00	0.83
Scotland	0.41	0.76	0.73	0.88	0.75
N.Ireland	0.63	0.49	0.53	0.78	1.18
TTWA Unemployment					
	1.20	0.96	1.01	0.99	1.00
Deprivation quintile (Ref = 1 - least deprived)					
2	2.04	0.94	1.00	1.05	1.03
3	1.32	1.06	1.14	1.14	1.04
4	1.60	1.43	1.46	1.44	1.20
5 (most deprived)	2.56	1.61	1.51	1.68	1.35
Rural or urban (Ref= urban)					
Rural	1.11	1.16	1.23	1.16	1.18
Constant	0.04	0.39	0.43	0.51	1.78

Note: figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Colour coding indicates higher and lower coefficients within each column. TTWA, travel-to-work area; CJRS, Coronavirus Job Retention Scheme ('furlough'); SEISS, Self-Employed Income Support Scheme.

odds of being furloughed or making use of SEISS are associated with: below degree-level education; being of 'moderate' clinical risk from COVID-19; coming from a lower income household; being self-employed or employed on a non-fixed salary; and working in a COVID-affected industry. Reduced odds of furlough were associated with: already working from home at least 'sometimes' prior to the pandemic; and being a keyworker. For complete loss of hours, those with below degree-level qualifications, females, the clinically vulnerable (both moderately and high risk), those in lower income quintiles, the self-employed, those employed on non-fixed salaries and those working in a COVID-affected industry had higher odds ratios. By contrast, reduced odds of loss of hours were found among the middle aged (aged 40–49), those already working from home pre-COVID and keyworkers. For the 'any labour market impact' variable – which combines job loss, government support schemes and loss of hours – these findings are largely replicated, though it is notable that single-adult households with children are identified as being significantly more likely to have experienced any of these impacts.

Tables 5a and 5b give regression results for the 'mitigations' outcome variables, namely making a new universal credit application, receiving financial transfers from family/friends, and requesting a credit or mortgage holiday. For these outcomes, the models with only area-level variables (Table 5a) reveal clear deprivation effects for UC claims and receipt of financial transfers, while region is a significant predictor of mortgage holiday receipt. Interestingly, rurality also predicts new UC claims. These relationships somewhat persist once household- and individual-level variables are included (Table 5b). As would be expected from the descriptive results, living in London was associated with increased odds of a new UC claim and reduced odds of a mortgage holiday. Scotland was also associated with reduced odds of a mortgage holiday, while Northern Ireland was associated with increased odds of a new UC claim and reduced odds of

Table 4b. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having experienced different labour market outcomes, including area-, household- and individual-level variables (April–June 2020)

	Lost job	Furlough	CJRS / SEISS	Lost 100% hours	Any employment hardship
Region (Ref=South England)					
London	0.71	1.57	1.44	0.97	1.07
North England	1.00	1.07	1.03	0.96	1.08
Wales	0.96	0.83	0.76	1.16	0.95
Scotland	0.62	0.86	0.72	0.84	0.77
N.Ireland	0.71	0.51	0.65	0.92	1.45
TTWA Unemployment					
	1.25	0.90	0.94	0.97	0.98
Deprivation quintile (Ref = 1 - least deprived)					
2	1.88	0.90	1.00	1.04	0.98
3	1.09	1.01	1.16	1.09	0.99
4	0.84	1.17	1.17	1.10	0.94
5 (most deprived)	0.98	1.18	1.20	1.29	1.02
Rural or urban (Ref= urban)					
Rural	0.92	1.11	1.03	1.01	1.07
Tenure (Ref = Owned)					
Socially rented (LA or Housing assoc)	2.97	1.01	1.02	1.05	1.11
Privately rented / other	1.10	1.20	1.15	1.20	1.21
Household Type (Ref = Multi adult, no children)					
Single adult, no children	1.01	0.90	0.89	0.84	0.85
Single adult, children	2.10	1.25	1.03	1.18	1.80
Multiple adult, children	0.85	0.97	1.09	1.13	1.25
Household income quintile pre-Covid (Ref = 5 - highest income)					
1	1.71	2.38	2.55	2.42	1.47
2	0.63	2.12	1.92	1.96	1.08
3	0.72	2.13	1.86	1.76	1.05
4	0.97	1.49	1.32	1.53	1.11
Age (Ref=60-65)					
20-29	1.26	1.15	1.27	0.77	0.95
30-39	0.38	1.04	1.05	0.82	0.77
40-49	0.38	0.75	0.83	0.60	0.67
50-59	0.41	1.12	1.16	0.91	0.88
Highest qualification (Ref = Degree)					
GCSE or lower	0.98	2.27	2.07	1.68	1.19
A-level	1.01	1.73	1.53	1.60	1.09
Other qualification	3.17	4.32	3.52	1.89	2.05
Sex (Ref=Male)					
Female	1.15	0.87	0.95	1.40	1.21
Ethnic group (Ref = White British)					
Asian or Asian British	2.01	0.62	0.77	0.62	0.79
Black, African, Caribbean or Black British	5.26	1.60	1.62	1.10	1.64
Other ethnic group	1.95	1.01	1.09	1.14	2.01
Born in the UK? (Ref = Yes)					
Not born in UK	2.06	1.12	0.90	1.21	1.37
Clinically vulnerable? (Ref = No)					
Moderate risk (clinically vulnerable)	1.08	1.44	1.41	1.50	1.24
High risk (clinically extremely vulnerable)	0.62	0.90	0.87	2.54	1.72
Received benefits pre-Covid (Ref = No)					
Yes	0.73	1.18	1.11	1.09	1.07
Type of work at baseline (Ref = Employed, fixed salary)					
Self-employed	1.10	0.33	3.83	2.05	6.56
Employed - non-fixed salary	2.01	1.85	1.92	1.45	1.68
Industry					
Worked in COVID-affected industry	0.81	2.09	1.94	1.62	1.88
Worked from home at all pre-COVID?					
Yes	0.74	0.54	0.62	0.47	0.87
Keyworker? (Ref = No)					
Yes	0.26	0.07	0.09	0.15	0.37
Constant	0.07	0.23	0.21	0.35	1.28

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Colour coding indicates higher and lower coefficients within each column. TTWA, travel-to-work area; CJRS, Coronavirus Job Retention Scheme ('furlough'); SEISS, Self-Employed Income Support Scheme.

receiving financial transfers. Those in the most deprived quintile had higher odds of making a UC claim, as did those in the second least deprived quintile, relative to those in the least deprived quintile, and rurality is also shown to be associated with increased odds of making such a claim.

As with the labour market outcome variables, a range of household and individual characteristics are also associated with changing likelihood of different outcomes occurring. A new UC claim was more likely among those living in more precarious housing (social renters and private renters), all of those under age 60 but especially those aged 20–29, those with lower incomes pre-COVID-19, with the lowest quintile having more than three times the odds of making a UC claim. Similarly, the self-employed, those employed on non-fixed salaries and, those working in COVID-impacted industries had a greater risk of needing UC than others. Use of financial transfers was more likely among private renters, those aged 30–39, those who had a clinically high risk from COVID-19, those in the lowest and second lowest income quintiles pre-pandemic, the self-employed, employees on non-fixed salaries, and pre-crisis unemployed. Use of such transfers was less likely among those reporting an Asian ethnic background, the ‘other’ ethnic group, and early retirees. The groups who had increased odds of applying for a credit holiday were those aged 30–39, those reporting an Asian ethnic background, the self-employed, employees on non-fixed salaries, and those receiving benefits prior to the pandemic. Lastly, increased odds of requesting a mortgage holiday were found among multiple adult households with children, those with non-degree-level qualifications (GCSE or lower, A-levels), females, those belonging to an Asian or Black ethnic background, those in the lowest

Table 5a. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having used four forms of ‘financial mitigation’, including only area-level variables (April–May 2020)

	New UC claim	Transfers	Credit holiday	Mortgage holiday
Region (Ref=South England)				
London	1.98	1.05	1.52	0.45
North England	0.98	0.81	1.20	0.72
Wales	0.89	1.05	1.82	0.73
Scotland	0.57	1.38	1.09	0.33
N.Ireland	3.45	0.61	3.08	0.33
TTWA Unemployment	0.81	0.94	0.77	1.23
Deprivation quintile (Ref = 1 - least deprived)				
2	2.36	1.68	0.79	1.01
3	2.06	1.63	1.44	1.49
4	2.65	2.45	2.04	1.57
5 (most deprived)	4.34	2.78	1.03	1.08
Rural or urban (Ref=urban)				
Rural	2.09	0.96	1.49	0.92
Constant	0.03	0.08	0.05	0.12

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Colour coding indicates higher and lower coefficients within each column. TTWA, travel-to-work area.

Table 5b. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having used four forms of 'financial mitigation', including area-, household- and individual-level variables (April–May 2020)

	New UC claim	Transfers	Credit holiday	Mortgage holiday
Region (Ref=South England)				
London	2.58	1.29	1.39	0.47
North England	1.05	0.76	1.18	0.76
Wales	0.87	0.81	2.01	0.90
Scotland	0.40	1.34	0.93	0.37
N.Ireland	4.14	0.38	3.90	0.36
TTWA Unemployment	0.86	0.96	0.78	1.15
Deprivation quintile (Ref = 1 - least deprived)				
2	2.28	1.52	0.71	0.98
3	1.62	1.28	1.23	1.21
4	1.37	1.50	1.63	1.16
5 (most deprived)	2.35	1.49	0.78	0.74
Rural or urban (Ref= urban)				
Rural	1.93	0.91	1.35	0.87
Tenure (Ref = Owned)				
Socially rented (LA or Housing assoc)	1.90	1.05	0.77	N/A
Privately rented / other	1.75	1.89	1.30	N/A
Household Type (Ref = Multi adult, no children)				
Single adult, no children	0.85	1.33	1.07	1.28
Single adult, children	1.15	1.52	1.63	0.92
Multiple adult, children	0.82	1.10	1.36	1.54
Age (Ref=60-65)				
20-29	3.60	2.25	1.83	0.89
30-39	3.59	2.90	2.25	0.79
40-49	2.77	2.27	1.29	0.66
50-59	2.46	1.83	1.09	0.54
Highest qualification (Ref = Degree)				
GCSE or lower	1.28	1.07	0.97	1.56
A-level	1.17	0.91	0.94	1.66
Other qualification	1.35	1.27	0.49	1.54
Sex (Ref=Male)				
Female	0.77	1.03	0.74	1.46
Ethnic group (Ref = White British)				
Asian or Asian British	0.59	0.42	2.19	2.17
Black, African, Caribbean or Black British	0.74	0.53	1.11	4.43
Other ethnic group	0.78	0.25	1.80	0.61
Born in the UK? (Ref = Yes)				
Not born in UK	1.60	0.75	1.05	0.87
Clinically vulnerable? (Ref = No)				
Moderate risk (clinically vulnerable)	0.77	1.29	0.93	0.99
High risk (clinically extremely vulnerable)	1.58	1.92	1.03	1.11
Household income quintile pre-Covid (Ref = 5 - highest income)				
1	3.31	3.07	1.87	2.32
2	2.86	1.92	1.51	1.29
3	2.00	1.38	1.67	0.89
4	1.44	1.03	1.78	1.08
Type of work at baseline (Ref = Employed, fixed salary)				
Self-employed	7.00	2.48	2.97	2.33
Employed - non-fixed salary	2.29	1.81	1.92	2.04
Not employed	1.36	2.50	1.34	0.75
Industry				
Worked in COVID-affected industry	2.17	1.05	1.39	1.30
Student pre-COVID	0.98	1.45	0.35	0.38
Retired pre-COVID	0.59	0.23	0.12	0.66
Caring role pre-COVID	0.79	0.69	0.58	1.17
Keyworker? (Ref = No)				
Yes	0.76	0.98	0.63	0.52
Received benefits pre-Covid (Ref = No)				
Yes	N/A	1.26	1.73	1.15
Constant	0.00	0.01	0.02	0.08

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Colour coding indicates higher and lower coefficients within each column. TTWA, travel-to-work area.

Table 5c. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having used four forms of ‘financial mitigation’ (April–May 2020) – adding job loss, furlough and the Self-Employed Income Support Scheme (SEISS) to the models.

	New UC claim	Transfers	Credit holiday	Mortgage holiday
Furloughed?				
1. Yes	2.33	1.74	2.28	2.91
Lost job?				
1. Yes	6.02	2.45	4.74	1.69
Self-employment support scheme?				
1. Yes	2.02	0.96	0.96	3.79
Constant	0.00	0.01	0.01	0.05

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Model also controls for those variables given in the previous table. Colour coding indicates higher and lower coefficients within each column.

income quintile, the self-employed, and employees on non-fixed salaries. Reduced odds meanwhile were found among those aged 50–59, and keyworkers.

For these outcome measures, we also ran an additional regression model which included a number of labour market outcomes – job loss, use of the furlough scheme and use of SEISS – as predictor variables. The aim of this was to identify the extent to which each of these outcomes were associated with good or poor financial outcomes. While the analysis is not causal in nature, it is useful to understand any correlations found within the data. As Table 5c shows, use of the furlough scheme is associated with significantly increased odds of all four mitigation techniques being used, while use of SEISS is associated with increased odds of a new UC claim and requesting a mortgage holiday. Job loss, however, was associated with even higher odds of all but a mortgage holiday occurring. For example, those who lost their job at any point during

Table 6a. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having a range of negative ‘financial outcomes’, including only area-level variables (April–May 2020).

	Poor subjective fin wellbeing	Used foodbank	Hungry	Behind with bills	Behind with housing payments	Decline in financial wellbeing	Decline in ability to pay bills	Decline in ability to keep up with housing costs	Any decline in financial outcome
Region (Ref=South England)									
London	1.80	0.84	0.71	1.54	0.99	0.91	1.66	1.40	0.93
North England	0.91	0.74	1.19	1.53	1.26	1.06	1.64	1.32	1.09
Wales	1.23	1.16	0.60	2.03	1.04	0.94	1.91	1.20	1.01
Scotland	1.02	0.82	0.68	0.94	0.93	0.90	0.97	0.56	0.80
N.Ireland	1.46	0.92	0.82	1.66	1.15	1.25	2.41	0.56	0.97
TTWA Unemployment	0.87	0.94	1.04	0.78	0.94	0.94	0.80	0.90	0.99
Deprivation quintile (Ref = 1 - least deprived)									
2	1.50	2.59	1.40	1.70	1.59	1.10	1.94	1.68	1.23
3	1.79	3.57	1.61	2.75	1.68	1.06	2.08	1.45	1.11
4	2.29	6.82	1.90	4.89	2.30	1.34	4.26	2.08	1.60
5 (most deprived)	5.78	17.06	2.31	9.94	3.33	1.45	7.40	2.11	1.80
Rural or urban (Ref= urban)									
Rural	1.71	0.74	1.41	1.77	1.04	1.32	1.70	1.03	1.35
Constant	0.06	0.01	0.02	0.05	0.08	0.36	0.03	0.08	0.39

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Colour coding indicates higher and lower coefficients within each column. TTWA, travel-to-work area.

Table 6b. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having a range of negative ‘financial outcomes’, including area-, household- and individual-level variables (April–May 2020).

	Poor subjective fin wellbeing	Used foodbank	Hungry	Behind with bills	Behind with housing payments	Decline in financial wellbeing	Decline in ability to pay bills	Decline in ability to keep up with housing costs	Any decline in financial outcome
Region (Ref=South England)									
London	1.32	0.39	0.74	1.04	0.71	0.82	1.17	1.09	0.76
North England	0.94	0.47	1.16	1.66	1.19	1.04	1.53	1.16	1.04
Wales	1.57	1.02	0.55	2.71	1.14	0.96	2.10	1.16	1.02
Scotland	0.98	0.55	0.62	0.85	0.90	0.95	0.68	0.53	0.79
N.Ireland	2.01	0.71	0.81	2.00	0.97	1.15	2.64	0.27	0.85
TTWA Unemployment	0.85	1.20	1.15	0.77	1.01	0.95	0.83	0.99	1.04
Deprivation quintile (Ref = 1 - least deprived)									
2	1.32	1.97	1.26	1.40	1.39	1.10	1.75	1.47	1.18
3	1.36	2.13	1.26	1.75	1.30	1.05	1.50	1.16	1.01
4	0.94	2.76	1.23	2.09	1.37	1.17	2.20	1.30	1.24
5 (most deprived)	1.89	3.53	1.13	2.90	1.42	1.18	2.94	1.03	1.25
Rural or urban (Ref=urban)									
Rural	1.51	0.60	1.32	1.56	0.99	1.30	1.52	1.02	1.33
Tenure (Ref = Owned)									
Socially rented (LA or Housing assoc)	2.31	2.92	2.10	3.24	2.28	1.20	2.54	1.80	1.54
Privately rented / other	2.65	2.42	1.32	3.27	1.49	1.32	2.32	1.00	1.61
Household Type (Ref = Multi adult, no children)									
Single adult, no children	2.26	0.91	1.35	1.67	1.03	1.10	1.63	0.97	1.11
Single adult, children	3.54	1.42	1.67	1.42	1.01	1.28	1.97	0.71	1.45
Multiple adult, children	1.63	0.75	2.03	1.20	0.88	1.24	1.47	0.79	1.43
Age (Ref=60-65)									
20-29	1.08	0.67	9.08	2.17	2.03	1.32	2.32	3.50	1.60
30-39	1.23	1.01	2.46	2.01	1.78	0.97	2.25	2.51	1.19
40-49	1.17	0.33	1.52	2.33	2.56	1.11	2.35	3.43	1.44
50-59	1.36	0.66	1.39	1.57	1.12	1.01	1.69	1.51	1.18
Highest qualification (Ref = Degree)									
GCSE or lower	1.85	1.83	1.74	1.64	1.84	1.55	1.46	1.88	1.61
A-level	1.21	0.93	0.93	1.04	0.83	1.19	1.15	0.77	1.08
Other qualification	1.43	1.11	2.03	2.25	2.33	0.74	1.13	2.70	1.20
Sex (Ref=Male)									
Female	0.87	1.87	0.85	0.95	0.99	0.85	0.83	0.87	0.91
Ethnic group (Ref = White British)									
Asian or Asian British	2.67	3.13	0.93	1.93	1.78	1.51	1.13	1.60	1.59
Black, African, Caribbean or Black British	4.79	0.80	1.13	4.17	1.09	1.42	1.58	1.40	1.14
Other ethnic group	2.92	0.44	0.47	1.14	0.45	0.73	1.50	0.33	0.95
Born in the UK? (Ref = Yes)									
Not born in UK	1.15	1.90	0.93	1.72	1.95	1.07	2.11	1.93	1.22
Clinically vulnerable? (Ref = No)									
Moderate risk (clinically vulnerable)	1.00	2.10	0.77	1.29	1.21	1.03	0.88	1.08	1.11
High risk (clinically extremely vulnerable)	0.95	2.13	1.73	1.04	1.00	1.06	0.79	0.94	0.95
Household income quintile pre-Covid (Ref = 5 - highest income)									
1	2.69	8.37	1.97	3.12	1.48	0.85	2.42	1.35	0.94
2	2.77	3.65	1.94	1.70	0.73	0.96	1.67	0.80	1.00
3	1.91	1.51	1.21	1.35	0.82	0.90	1.25	0.93	0.99
4	1.45	0.35	1.25	0.82	1.15	1.02	0.62	0.84	1.09
Received benefits pre-Covid (Ref = No)									
Yes	0.83	0.69	1.09	1.26	0.92	0.80	0.81	0.96	0.78
Type of work at baseline (Ref = Employed, fixed salary)									
Self-employed	3.86	0.50	1.35	3.08	1.13	2.39	3.78	0.81	2.60
Employed - non-fixed salary	1.69	0.89	0.93	2.34	1.35	1.45	2.69	1.77	1.55
Not employed	2.95	3.02	1.06	2.61	1.77	1.65	2.10	1.66	1.68
Industry									
Worked in COVID-affected industry	1.29	1.11	1.12	1.09	1.19	1.17	1.17	1.11	1.12
Student pre-COVID	0.29	1.22	1.31	0.57	1.80	1.16	0.61	1.43	1.19
Retired pre-COVID	0.11	0.32	0.52	0.14	0.52	0.40	0.15	0.99	0.42
Caring role pre-COVID	0.43	1.21	1.55	0.77	1.10	0.67	0.81	0.89	0.71
Keyworker? (Ref = No)									
Yes	0.65	0.73	0.90	0.79	0.98	0.78	0.89	0.87	0.86
Constant	0.01	0.00	0.00	0.00	0.02	0.24	0.00	0.03	0.17

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Colour coding indicates higher and lower coefficients within each column. TTWA, travel-to-work area.

Table 6c. Binary logistic regression model results (odds ratios) predicting the likelihood of respondents having a range of negative ‘financial outcomes’ (April–May 2020) – adding job loss, furlough and the Self-Employed Income Support Scheme (SEISS).

	Poor subjective fin wellbeing	Used foodbank	Hungry	Behind with bills	Behind with housing payments	Decline in financial wellbeing	Decline in ability to pay bills	Decline in ability to keep up with housing costs	Any decline in financial outcome
Furloughed?									
1. Yes	1.62	0.68	1.31	1.77	0.92	1.78	1.51	0.65	1.64
Lost job?									
1. Yes	4.64	1.35	2.35	4.54	1.19	2.06	3.52	1.32	1.89
Self-employment support scheme?									
1. Yes	0.86	2.27	1.99	0.54	0.89	1.47	0.63	2.16	1.58
Constant	0.01	0.00	0.00	0.00	0.02	0.20	0.00	0.03	0.14

Note: Figures represent odds ratios. Those shown in bold were statistically significant at $p < 0.05$. Each column represents a separate regression model. Model also controls for those variables given in the previous table. Colour coding indicates higher and lower coefficients within each column.

lockdown had six times higher odds of making a new UC claim and nearly five times higher odds of requesting a credit holiday.

Tables 6a and 6b give regression results for our remaining financial outcome measures. Again, while we see strong deprivation effects in the area-only models (Table 6a), few significant relationships remain between the area-level variables and the outcome measures once more variables are included in the models (Table 6b). Living in the North of England or Wales is associated with reporting being behind with some or all household bills, while living in Scotland or Northern Ireland was associated with reduced odds of a decline in the ability to meet housing costs. Unexpectedly, increased TTWA unemployment was associated with decreased odds of being behind on housing but living in the most deprived areas was associated with greater likelihood of having poor subjective financial well-being, using a foodbank, being behind with the bills and having a decline in the ability to meet household bills. Lastly, those in rural areas were significantly more likely to report poor subjective financial well-being, being behind with the bills, worsening subjective financial well-being and a decline across any of the measures capturing change over time.

Many of the significant individual- and household-level variables in previous regression models are significant once again in Table 6b. Both social and private renters have higher odds of a poor financial outcome. Negative outcomes are also commonly associated with being relatively young, and being self-employed, employed on a non-fixed salary basis, or unemployed. Other notable findings are that being a single parent is associated with 3.5 times higher odds of having poor subjective financial well-being, that those from a black ethnic background have four times higher odds of being behind with their household bills than those from a white background, and that those in the lowest income quintile had eight times higher odds of having used a foodbank than those in the highest quintile.

Table 6c gives an additional version of the models included in Table 6b but with the inclusion of job loss, furlough and use of SEISS as predictor variables. While it highlights that for several financial outcome measures, furlough and to a lesser extent SEISS is associated with increased odds of a poor outcome, it also shows that job loss was associated with even higher odds of a poor outcome. For example, while those who were furloughed had 77% higher odds of struggling with the bills than those who weren't furloughed, this rises to over 450% for those who had lost their job.

5. DISCUSSION

As previously noted, the early months of coronavirus lockdown were marked by relatively similar lockdown restrictions across the nations and regions of the UK. As a result, the economic impacts were also relatively evenly spread, with variation arising as the result of the underlying socio-economic and demographic composition of local populations, and especially the clustering of vulnerabilities rather than because of geography itself. Indeed, once individual- and household-level characteristics had been considered, we found limited evidence of our area-level variables being significant predictors of financial outcomes. There were, however, exceptions to this rule. Those living in London and Northern Ireland, for example, were found to have higher odds of applying for UC than would be expected given their individual and household characteristics. Area deprivation meanwhile is found to be a significant predictor of poor financial outcomes, even once factors such as household income are controlled for. This highlights how individuals in areas which are ‘left behind’ find substantial barriers in terms of gaining well-paid, secure employment. Significantly, it may also hint at the role of the ‘poverty premium’ – where being poor costs more, usually in the form of the increased costs of accessing essential services, such as insurance and utilities (Davies et al., 2016).

Our main reflection on the findings is the way that the pandemic has served to reinforce pre-existing, long run structural inequalities enhanced by austerity. For example, job loss was especially likely among social tenants, those from black ethnic backgrounds, and those not born in the UK, while furlough was more common among those from lower income backgrounds. Our data shows that more than a third (35%) of those in the lowest household income quintile pre-pandemic were furloughed during the first lockdown, compared with just 18% of those in the highest paid quintile. The wealth divide has also played an important role, with the odds of being newly falling behind with the bills, for example, being more than twice as high for both social and private renters when compared with owner-occupiers. As reported elsewhere, the wealth gap between the richest 10% of families and the median family increased by £40,000 during the pandemic, now standing at 55 times the typical household income (Leslie & Shah, 2021).

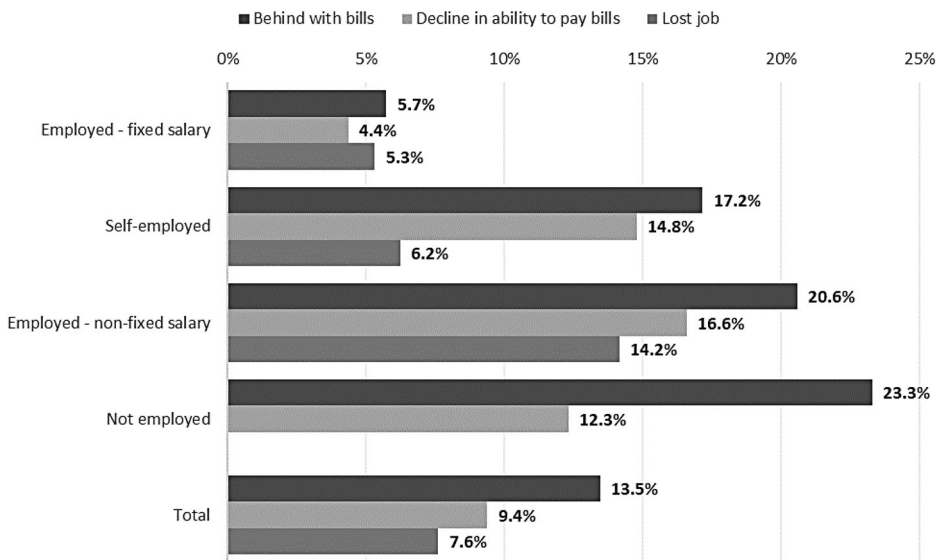


Figure 1. Percentage of respondents behind with their bills, who had a decline in their ability to meet their bills or who lost their job, by nature of employment pre-pandemic, April–June.

New forms of inequality are also emerging. In particular, insecure working practices and the rapid advance of homeworking throughout the pandemic have played a major role in households' ability to meet their financial commitments. The number of self-employed people in the UK increased by around 1 million between 2010 and 2020, from 4 million to 5 million (ONS, 2021a). Over the same period, the number of people in employment on a zero-hours contract increased from 168,000 to 974,000 (ONS, 2021b). Many of these people found themselves on the frontline of the financial impacts of the crisis. As Figure 1 shows, nearly 21% of those employed with a non-fixed salary (i.e., with irregular hours or paid on commission) were behind on their bills during the first lockdown, while 17% experienced a worsening of their ability to meet their household bills through the pandemic, and 14% lost their job altogether. While the situation was slightly better for the heterogeneous self-employed, as a group they were still far more financially strained by the pandemic than those employed on fixed salaries prior to the crisis. Unsurprisingly, the ability to work from home was critical in predicting financial difficulties: while 19% of those who had worked from home prior to the crisis were furloughed, for those who had not previously done so the figure was much higher (31%). Respective figures for job loss were 4.8% and 8.8%, again highlighting the disparity. How such trends evolve in future will shape much of the financial inequalities we see in coming years and decades.

Lastly, it is important to note the role of government policy in responding to the financial crisis caused by the pandemic. While existing inequalities did widen, it is important to consider the counterfactual had the CJRS ('furlough') or the SEISS not been introduced. The results highlight that those who were put on these schemes were certainly worse-off than those individuals who had the ability to continue to work 'as usual' during the pandemic. But those who accessed these schemes also appear substantially better off than those who could not and therefore lost their paid employment. This is perhaps unsurprising given that these schemes replaced a relatively high proportion of income compared with out-of-work benefits (even considering the temporary £20 per week increase in UC that the government announced as a response to the crisis). However, this does raise a question: If the furlough scheme has been successful, should the welfare system in the longer term look to replicate it? By preventing individuals and households, especially when spatially clustered, from falling into financial precarity and potentially entering a cycle of financial difficulty and arrears, some of the major economic harms were avoided. In the shorter term, meanwhile, there are questions of what may happen to household finances in the absence of such support, especially with the prospect of future waves of infection and enduring economic uncertainty.

6. CONCLUSIONS

Our exploration of the socio-economic burden of the coronavirus crisis for individuals connects to broader discussions around fundamental social and economic inequalities within society. In the UK (and much of the rest of the Western world) these discussions highlight the ongoing impacts of long-term economic change and deindustrialization on individual resilience and precarity. There is substantial evidence that residential sorting is leading to increases in socio-economic segregation in much of Europe (Musterd et al., 2017), a trend that is replicated within the UK (for evidence for London, see Manley, 2021). With the population becoming increasingly polarized the unequal impacts of crises such as the pandemic are likely to be increasingly amplified. What this points to is a growing concentration of people in places unable to absorb the personal financial costs of stopping work and a widening of health and underlying socio-economic inequalities (Blundell et al., 2020). The analysis presented here is, of course, observational and therefore the

causal pathways relating to the processes by which places – regional or local – may have influenced individual experiences of the pandemic are not explorable. Moreover, there are clear sorting processes, alluded to directly above, which result in similar people living in the same space. But the conclusion we draw is to emphasize precisely that: increased polarization and separation between economic groups will enhance the impacts of national policies – such as austerity – and the disruption from global disturbances such as the pandemic meaning that while the issues are not local the effects will be. Some communities by their composition will be better set to weather these problems and others will not have the structural resilience needed in addition to the support measures to survive. Considering the wider repercussions of the COVID-19 pandemic, it is possible to use the post-COVID policy measures as an opportunity to be synergistic, simultaneously stimulating economic growth whilst mitigating broader societal challenges. The phrase ‘building back better’ has peppered materials released by international organizations (Organisation for Economic Co-operation and Development (OECD), 2020; United Nations, 2020), national administrations (HM Treasury, 2021) and local political leaders (e.g., Bristol City Council (BCC), 2020), as well as campaigning organizations (e.g., buildbackbetteruk.org), advancing that:

Everything we do during and after this crisis must be with a strong focus on building more equal, inclusive and sustainable economies and societies that are more resilient in the face of pandemics, climate change, and the many other global challenges we face.
(UN Secretary General Antonio Guterres; UN, 2020, p. 1)

Seen in conjunction with the current UK government’s proposals to ‘level up’ the North of the country, there appears a focusing of policy responses on a broader, holistic set of goals and the use of multidimensional policy tools. But while the asymmetric consequences of the pandemic are clear, the policy tools that would allow society to level up or ‘build back better’ are less clear or formulated. Turning to the United States, President Joe Biden (Biden, 2021) has pledged to galvanize the manufacturing and technology sectors and stimulate the renewable energy sectors to create new, better paid jobs for those left out of work, linking his economic agenda to calls for racial equity and justice. Yet, it is unclear how these new jobs will be made accessible to those left unemployed in the retail and hospitality sectors. In the UK, the Conservative government’s ‘New Deal for Britain’ promises an economic agenda that will ‘build back greener, build back faster’ by investing in infrastructure and reforming the planning system (Prime Minister’s Office, 2020, p. 1). However, recent developments have highlighted ongoing disparity in investments with High Speed 2 (HS2) not being extended to many Northern cities, as well as uncertainty about how this approach might address the working conditions that have exacerbated the impacts of COVID-19 in communities across the UK. Many places have adopted economic programmes centred on green stimulus – with financial aid channelled towards the simultaneous economic and ecological recovery, including a decrease in emissions and equitable growth, but the real differences between people and between communities in terms of how well placed they are to weather a crisis means that there is irrevocable evidence of the impacts of long-term structural disinvestment. While the coronavirus itself may have been equally transmissible to all, the consequences of infection and of the disruption resulting from measures to reduce the spread were not. The analysis presented here shows very different outcomes depending on where people lived and as a result a wider discussion about the spatial clustering of disadvantage is needed urgently. While the Levelling Up agenda may present broad brush opportunities to invest in larger areas that have fallen behind, there remains a more localized

compositional poverty which may be addressed by targeting the most deprived neighbourhoods in (and beyond) the UK.

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DATA AVAILABILITY

The final dataset and derived variables used for analyses are not available; however, the original survey data used for this study are available for download from the UK Data Service. For more information, see: (1) Understanding Society COVID-19 study (SN 8644); Society COVID-19 geographical identifiers, LSOA 2011 (SN 8663) (requires a special licence application); and Understanding Society main Waves 1–10 (SN, 6614).

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