Received: 15 December 2022 | Revised: 2 May 2023 | Accepted: 24 May 2023

DOI: 10.1111/1468-4446.13039

ORIGINAL ARTICLE

WILEY

Doubly disadvantaged: Unemployment, young age, and electoral participation in the United Kingdom

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Funding information
Leverhulme Trust; Horizon 2020 Framework Programme; ERC Synergy Project DINA, Grant/Award Number: 856455

Abstract

Previous studies examine how unemployment affects socio-political behaviour, but this literature has scarcely focused on the role of the life-course. Integrating the frameworks of unemployment scarring and political socialisation, we posit that unemployment experiences, or scars, undermine electoral participation, and that this is exacerbated at younger ages. We test these hypotheses relying on the British Household Panel Survey and Understanding Society datasets (1991–2020), employing panel data analysis approaches as Propensity Score Matching, Individual Fixed Effects, and Individual Fixed Effects with Individual Slopes. Results suggest that unemployment experiences depress electoral participation in the UK, with effect sizes around −5% of a Standard Deviation in turnout. However, this effect varies powerfully by age: the impact of unemployment on electoral participation is stronger at younger ages (−21% SD at age 20), and weaker to not significant after age 35. This is robust across the three main approaches and several robustness checks. Further analyses show that the first unemployment spell matters the most for electoral participation, and that for individuals under 35, there is a scar effect lasting up to 5 years after the first unemployment spell. The life-course emerges as central to better

understand the relationship between labour market hardships and socio-political behaviour.

KEYWORDS
electoral participation, life course, panel data, political sociology., unemployment scars, United Kingdom

1 | INTRODUCTION

While the relationship between labour market hardships and politics has been at the forefront of political sociology since the Marienthal study (Jahoda et al., 2017 [1933]) and Lipset (1960), it has seen a resurgence after the Great Recession. Scholars have linked labour market hardships to the challenges for social democracy (Bürgisser & Kurer, 2021; Lindvall & Rueda, 2014), the rise of Radical Right Parties (Emmenegger et al., 2015; Gidron & Hall, 2017; Norris & Inglehart, 2019; Rydgren, 2007), socio-political trust (Bauer, 2018; Giustozzi & Gangl, 2021; Laurence, 2015; Mewes et al., 2021; Schraff, 2018), political preferences (Gelepithis & Jeannet, 2018; Marx & Picot, 2020; Wiertz & Rodon, 2021) and voting behaviour (Marx, 2016; Rovny & Rovny, 2017). Among these, scholars have focused on how labour market hardships shape political engagement and participation (Marx & Nguyen, 2016; Rovny & Rovny, 2017; Österman & Lindgren, 2021). The latter relationship is crucial: if those that are most socially vulnerable are also politically marginal, this could create a vicious circle, with potentially dire effects for contemporary democracies (Lijphart, 1997; Verba, 1996).

Despite the salience of this issue, there is scarce research on a key aspect of this relationship: the role of past experiences of unemployment, also known as unemployment scars, which negatively affect several socio-economic outcomes, ranging from the labour market (Brand, 2015; Gangl, 2004, 2006; Mooi-Reci & Ganzeboom, 2015), to health and family (Di Nallo et al., 2022; Goñalons-Pons & Gangl, 2021; Knabe & Rätzel, 2011).

To the best of our knowledge, only three studies have examined the impact of unemployment scars on electoral participation: Emmenegger et al. (2017), who originally extended the framework of unemployment scarring to political engagement; Azzollini (2021), who examined the joint impact of unemployment scars and contextual unemployment on electoral participation; and Österman and Brännlund (2023), who focused on the role of the life-cycle and workplace socialisation in Sweden. Emmenegger et al. (2017) highlight that the timing of unemployment during the life-course matters: relying on panel data from the German Socio-Economic Panel, Emmenegger et al. (2017) found how experiencing unemployment during youth has strong detrimental effects on political interest and electoral participation, due to the '*impressionable years*' phase in which political behaviour is formed and crystallises in the long-run (Alwin & Krosnick, 1991; Neundorf & Niemi, 2014; Plutzer, 2002). Österman and Brännlund (2023), relying on panel register data from Sweden, found a similar pattern, with negative (if modest) and significant effects on turnout up to ages 35–39. As young individuals typically vote less (Franklin, 2004; Smets, 2016; Smets & Van Ham, 2013), these findings highlight a concrete risk of a *double disadvantage*: the lower electoral participation of young citizens may be further decreased by their heightened risk of labour market outsiderness (Biegert, 2019; Esping-Andersen, 1999; Schwander & Häusermann, 2013). Specifically in the United Kingdom, this risk is real: the youth unemployment rate was consistently above 10% since the start of the study period, as opposed to a total unemployment rate which last saw that peak in 1992 (ONS Unemployment Statistics, 2021). Hence, the vicious circle described by Verba (1996) and Lijphart (1997) may materialise as a pattern of cumulative socio-economic and political disadvantages over the life course (DiPrete & Eirich, 2006).

Therefore, our goal is to extend the theoretical framework by Emmenegger et al. (2017) to study the joint impact of unemployment scarring and age in the United Kingdom, a country where age shapes participation levels (Smets, 2016; Smets & Van Ham, 2013), as well as political preferences (Prosser et al., 2020). In doing so, we follow the call for future research by Emmenegger et al. (2017) to study the focal relationship in other geographical contexts.

Our key contributions are two: first, our primary focus is on electoral participation rather than political interest; second, we combine the Propensity Score Matching approach applied by Emmenegger et al. (2017) with two additional panel data analysis approaches, Individual Fixed Effects (Brüderl & Ludwig, 2015; Imai & Kim, 2019; Österman & Brännlund, 2023), and its more flexible variant with Individual Slopes (Gangl, 2022; Ludwig & Brüderl, 2021), so far not yet applied to the research question. These techniques control for time-invariant unobserved heterogeneity at the individual level, which includes yearly birth cohort, thus circumventing the well-known Age-Period-Cohort problem (Glenn, 1976) to examine age effects (Ludwig & Brüderl, 2021), and allow us to further examine the role of cumulative unemployment spells, and whether the unemployment effects are short- or long-term.

To do so, we rely on the British Household Panel Survey and Understanding Society (UKHLS), collectively ranging from 1991 to 2020, comparing estimates from different panel data analysis approaches. The substance of our findings is that the impact of unemployment scarring on electoral participation is around −5% of a Standard Deviation in the latter, with some differences in significance across models. Regarding the role of age, the three main models concur that the impact of unemployment scars on electoral participation is strongest under the age of 35, (−21% SD at age 20, relatively to the non-scarred respondents of the same age), but the effect decreases in magnitude and significance after age 35. These results illuminate how cumulative socio-political disadvantage unfolds over the life-course, remarking the centrality of the latter to better understand the relationship between labour market hardships and socio-political behaviour.

2 | THEORETICAL FRAMEWORK

2.1 | Unemployment and politics

Since the classic Marienthal study (Jahoda et al., 2017 [1933]), the relationship between labour market disadvantage and politics has been central for political sociology, which has explored it from three main directions: the impact of labour market disadvantage on social policy preferences (Gelepithis & Jeannet, 2018; Marx & Picot, 2020; Naumann et al., 2016); the influence of the labour market insider-outsider divide on electoral outcomes (Emmenegger, et al., 2015; Marx, 2016), such as support for radical forces (Gidron & Hall, 2017; Norris & Inglehart, 2019; Rovny & Rovny, 2017) and the challenges for social democracy (Bürgisser & Kurer, 2021; Lindvall & Rueda, 2014); the unclear impact of unemployment on electoral participation, with the opposing research strands of mobilisation (Burden & Wichowsky, 2014; Lipset, 1960) and withdrawal (Jahoda et al., 2017 [1933]; Rosenstone, 1982; Brady et al., 1995; Marx & Nguyen, 2016).

Despite the considerable attention on this broad relationship, until recently there has been a scarce attention on the role of *past* experiences of unemployment as opposed to current unemployment (Rosenstone, 1982) or the unemployment rate (Burden & Wichowsky, 2014). These past experiences of unemployment are broadly addressed as '*unemployment scars*', which may leave negative long-term '*scar effects*'[1] on several socio-economic outcomes, beyond the negative short-term consequences of unemployment (Arulampalam et al., 2001; Clark et al., 2001; Gangl, 2006). Belonging to the family of '*trigger events*' that disrupt the life course and may lead to the accumulation of disadvantage (DiPrete, 2002; DiPrete & Eirich, 2006), the scar effects of unemployment have originally been documented in the labour market, such as lower re-employment chances and income, and higher risk of further job loss (Brandt & Hank, 2014; Di Nallo & Oesch, 2021; Gangl, 2004; Luijkx & Wolbers, 2009; Mooi-Reci & Ganzeboom, 2015). Afterwards, the scarring theoretical framework has been expanded to other socio-economic domains, including family (Di Nallo et al., 2022; Goñalons-Pons & Gangl, 2021) and health (Knabe & Rätzel, 2011; Mousteri et al., 2018).

In recent years, this research programme has focused on socio-political outcomes: past unemployment experiences depress social trust (Azzollini, 2023; Laurence, 2015; Mewes et al., 2021) and participation (Eckhard, 2020; Pohlan, 2019), shift those who lost their jobs towards the left (Wiertz & Rodon, 2021), undermine political trust (Giustozzi & Gangl, 2021), and depress political engagement and participation (Azzollini, 2021; Emmenegger et al., 2017). Yet, the works by Emmenegger et al. (2017) on Germany and by Österman and Brännlund (2023) on Sweden are, to the best of our knowledge, the only to study the joint impact of job loss and age on political engagement relying on panel datasets. In this context, age is crucial, as it is not only a key predictor of both electoral participation (Franklin, 2004; Smets & Van Ham, 2013), and of labour market outsiderness (Biegert, 2019; Esping-Andersen, 1999; Schwander & Häusermann, 2013), but also determines whether the impact of unemployment is harmful or not (Emmenegger et al., 2017).

To expand this framework to the United Kingdom, we first review the mechanisms linking past unemployment experiences to lower electoral participation, and subsequently examine the joint impact of the former with age. Further theoretical perspectives, related to the role of cumulative unemployment spells and to whether the impact on turnout lasts beyond the short-term, will be addressed by robustness checks and additional analyses.

2.2 | Unemployment and electoral participation: Mechanisms

The socio-psychological effects of unemployment on political engagement are deeply rooted in the literature: Jahoda et al. (2017 [1933]) argue that the consequences of job loss are not merely material, as they also undermine the self-perceived societal position (Brand, 2015). In their study of the mobilisation of the unemployed in Europe, In Chabanet and Faniel (2012) categorise these socio-psychological mechanisms linking unemployment to lower political mobilisation into four main groups: lack of resources; lack of collective identity; inward focus; and social stigma. These four groups can be connected to specific mechanisms linking unemployment to low electoral participation: the lack of resources in the Civic Voluntarism Model (Brady et al., 1995), the relationship between occupational and political identities (Alford, 1967; Lipset, 1960); low political efficacy (Emmenegger et al., 2015; Rosenstone, 1982); and social stigma/disruption of social relationships (Jahoda et al., 2017 [1933]; Rosenstone, 1982; Pohlan, 2019; Eckhard, 2020). We engage with each of these below, arguing how they apply specifically to *past* unemployment experiences.

Resources are central to the Civic Voluntarism Model by Verba and coauthors (1995), which identify them as '*time*, *money*, *and civic skills*' (Brady et al., 1995, p. 273). The first two resources can be easily linked to past unemployment: it is well-documented that job loss negatively impacts *earnings* after re-employment (Gangl, 2006), with effects lasting up to 20 years later (see Brand, 2015 for an extensive review). Beyond income, past employment experiences may also decrease *time* available to the re-employed, as those scarred by unemployment face further job loss risks (Luijkx & Wolbers, 2009), and considerably lose job control and authority, a pattern found to by particularly strong in the UK by Dieckhoff (2011). The third resource is instead identified as the communication skills facilitating socio-political engagement (Brady et al., 1995), developed in organisational venues. These skills are central in the theoretical framework by Emmenegger et al. (2017) linking unemployment scars to political disengagement: being employed in a workplace fosters civic skills through informal political discussions, as well as formal coordination through unions, both fostering electoral participation (Radcliff, 2001). Past unemployment experiences may therefore lead to lower electoral participation by decreasing these three resources, as found empirically by Emmenegger et al. (2017): unemployment experiences below age 30 still affected turnout at age 40 in Germany.

Occupation typically is considered as the central determinant of socio-political positions (Weber, 2009 [1922]; Lipset, 1960): workplaces constituted the locus of political socialisation (Alford, 1967), whereas the type of occupation largely shaped political behaviour, such as class voting (Evans, 2000). Therefore, unemployment may decrease electoral participation by impairing the sense of self-perceived occupational/societal position (Jahoda et al., 2017 [1933]; Brand, 2015) and the associated political preferences. Given that unemployment scars often require compromising on job characteristics for re-employment, such as on wages and hours (Arulampalam et al., 2001), job authority/status (Dieckhoff, 2011), and often different occupation sector (Brand, 2015), the resulting disorderly' career trajectory (Wilensky, 1961) may even amplify the blurring of social position after re-employment. In Sweden, Österman and Brännlund (2023) provide support for the role of the workplace: higher turnout among former workplace colleagues mitigates the negative impact of unemployment on electoral participation.

Intersecting politics and social psychology (Gecas, 1989), political efficacy is a feeling that '*individual political action does have, or can have, an impact upon the political process, that it is worthwhile to perform one's civic duties.*' (Campbell et al., 1954, p. 187). This concept has two main variants, external and internal (Balch, 1974; Lane, 1959): external political efficacy is the perceived responsiveness of political efficacy to citizens, while internal political efficacy is the individuals' self-assessed ability to influence politics (Emmenegger et al., 2015). Focussing on the Netherlands, Emmenegger et al. (2015) rely on these concepts to understand through which channels labour market disadvantage translates into different political outcomes: abstention, voting for a traditional centre-left party, or for protest forces. This is driven by the impact of job loss on political preferences, which become more pro-redistribution (Wiertz & Rodon, 2021). During the period of our analysis (1991–2020), the UK Labour party has gradually moved towards more centrist economic positions, in turn leading the traditionally left-wing working class to electoral abstention in a First-Past-The-Post majoritarian electoral system (Evans & Tilley, 2017). Therefore, external efficacy may link unemployment scarring to abstention by shifting economic preferences leftwards beyond the short-term, which may not be sufficiently represented by a large political force. Furthermore, sociological research highlights how job loss is akin to a breach of a social contract (Laurence, 2015), fostering distrust in both society (Azzollini, 2023; Mewes et al., 2021) and politics (Giustozzi & Gangl, 2021), heightening the likelihood of abstention.

On the other hand, low internal political efficacy, or alienation, is also a classic mechanism for the focal relationship (Emmenegger et al., 2015, 2017; Marx & Nguyen, 2016; Rosenstone, 1982). Rosenstone (1982, p. 26) argued that that unemployment leads individuals to focus inwardly, to '*keep their bodies and souls together, and not bother with remote concerns like politics*'. In such a situation, individuals '*feeling like a failure in the labour market*' (Emmenegger et al., 2015, p. 195) may feel powerless to influence the political system, and continue to feel so even after re-employment given decreased job control/authority (Dieckhoff, 2011), and therefore not bother voting. Marx and Nguyen (2016) further build on this, arguing that unemployment '*impairs self-concept, social contact, and material and cognitive resources*' (p. 636), crucial for political engagement.

Beyond workplace connections, unemployment also disrupts social relationships (Jahoda et al., 2017 [1933]). The key mechanism is social stigma against the unemployed (Rosenstone, 1982), who in turn are less likely to participate socially (Pohlan, 2019). Eckhard (2020) explains this through social comparison theory: '*comparing oneself to persons holding a better social position can lower one's self-esteem and is therefore often avoided. Breaking off contact with social ties might thus be a common pattern of reaction to feelings of shame and inferiority provoked by unemployment.*' (Eckhard, 2020, p. 3). The severed social ties are likely not to be fully recovered with re-employment: on one hand, social ties in the former workplace may not necessarily be equally replaced in a new workplace, given the likely inferior job characteristics (Brand, 2015) and the associated inward focus to keep '*body and souls together*' (Rosenstone, 1982, p. 26). Relatedly, the stigma associated with unemployment may persist in time: Brand and Burgard (2008) find that job loss drives lower social engagement in the US well after the experience itself. The socio-psychological character of this stigma mechanism is further remarked by the differential impact of unemployment scars by gender due to male-breadwinner norms (Di Nallo et al., 2022; Goñalons-Pons & Gangl, 2021; Mooi-Reci & Ganzeboom, 2015), and by the role of personality: Emmenegger et al. (2017b) find the impact of unemployment experiences on political interest is mitigated to nullified by higher levels of extraversion, which are associated to more social engagement. As social participation constitutes a key avenue for political socialisation and coordination (Skocpol, 1999), it may be an additional mechanism for the focal relationship.

Integrating these four mechanisms from unemployment and scarring research, we posit the following:

Hypothesis 1. Individuals with unemployment scars are less likely to vote than individuals without those scars.

2.3 | Joint impact of unemployment scars and young age on electoral participation

Since the 1930s, social scientists have documented that young citizens tend to vote less than their older peers (Tingsten, 1937). While this pattern has exacerbated in recent decades, with contemporary youth being less likely to vote than their parents and grandparents at a comparable age (Smets, 2016; Smets & Van Ham, 2013), there is still clear evidence of life-cycle effects (Franklin, 2004; Prosser et al., 2020). Plutzer (2002) explains the latter through a developmental theory of turnout: its starting level is deeply influenced by the socio-demographic characteristics of the individual and the context of the first elections. Afterwards it only grows inertially over time for non-voters, while it is reinforced by path-dependence for voters (Plutzer, 2002).

Therefore, as argued by Emmenegger et al. (2017) and Österman and Brännlund (2023), it is plausible that these life-cycle effects interact with unemployment scars in jointly affecting electoral participation. They articulate that this is the case by integrating the Civic Voluntarism model by Verba and coauthors (1995) with the *impressionable years* hypothesis from the political socialisation literature. This refers to a critical period when young people are deeply influenced by events and develop patterns of political attitudes and behaviour which crystallise in the long-term (Jennings & Niemi, 2014 [1981]; Alwin & Krosnick, 1991; Smets, 2016). The span of this window of flexibility is not strictly identified in the literature, but is roughly defined as taking place from mid-teenage years until mid-twenties or early thirties (Jennings & Niemi, 2014 [1981]; Neundorf & Niemi, 2014; Emmenegger et al., 2017).

Emmenegger et al. (2017) relate this to the formation of civic skills over the life-course: if job loss takes place during the impressionable years window, it will hamper the developing civic skills by disrupting the formative relationships in the workplace, thus decreasing electoral participation. In contrast, unemployment experiences occurring after the impressionable years window, and therefore after political socialisation has largely completed, may have a lower impact on the already solidified civic skills of the individual, thus softening the decrease in electoral participation (Emmenegger et al., 2017). This life-course perspective (Billari, 2005; Giele & Elder, 1998) may be extended to the other three types of mechanisms categorised by In Chabanet and Faniel (2012). Unemployment experiences may disproportionately impair the formation of a clear occupational-political identity during the impressionable years window, but would not do so if the worker experiences unemployment after a long job tenure. Similarly, job loss may not influence internal political efficacy if it the former occurs after political socialisation has concluded (Emmenegger et al., 2015) and there is an established habit of voting automaticity (Plutzer, 2002), while it may be particularly disruptive if the habit has not solidified. Finally, unemployment experiences may have a softer impact on socio-civic participation if the latter has long been established, whereas it may disrupt participation in an early socialisation stage. Considering that young people are typically labour market outsiders (Biegert, 2019; Esping-Andersen, 1999; Schwander & Häusermann, 2013) and that the UK youth unemployment rate has consistently been above 10% for the entirety of the study period (ONS Unemployment Statistics, 2021), this occurrence is potentially likely. Indeed, Brand and Burgard (2008) find that unemployment experiences did negatively affect social participation more strongly among younger individuals, but not significantly between ages 53–64, as older workers face lower stigma from displacement as closer to retirement (Brand & Burgard, 2008). Similarly, Österman and Brännlund (2023) find that unemployment experiences depress turnout only up to the age group 35–39 in Sweden, relying on register data.

Therefore, we posit that unemployment scars occurring during young age create a *double disadvantage*: while young individuals are already less likely to vote on their own due to life-cycle effects, experiencing unemployment during this window may disproportionately undermine electoral participation, compared to those first experiencing it after political socialisation has concluded. Thus, we posit that:

Hypothesis 2. Unemployment experiences decrease electoral participation more strongly if experienced within the impressionable years window (until early thirties).

3 | DATA AND ANALYTICAL STRATEGY

3.1 | Dataset

We rely on panel data from the British Household Panel Survey (1991–2009) and the Understanding Society – UK Household Longitudinal Study (UKHLS) (2009-ongoing), conducted by the Institute for Social and Economic Research at the University of Essex, Institute for Social and Economic Research (2021). The studies follow socio-economic, demographic, and political dynamics for a panel of British households. Our dataset is directly available as harmonised in the UK Data Service repository and covers all the yearly waves between 1991 and 2020. Around 84% of BHPS households moved to UKHLS (Lynn & Borkowska, 2018). The BHPS attrition rate is relatively low: around 70% of the 1991 participants were active 12 years later, and 40% was active 24 years later, while this figure amounts to 52% for the UKHLS six years after the initial sample (Lynn & Borkowska, 2018). The 48% of attrition over 6 years is lower than the wave-to-wave attrition rate of similar datasets, for example, 11% for LISS (Emmenegger et al., 2015; Naumann et al., 2016; Wiertz & Rodon, 2021).

We provide descriptive statistics for the main sample in Table 1, which amounts to 37,111 observations for 11,375 unique respondents. The main analyses are robust to the inclusion of longitudinal weights, despite severe sample size loss (−49%, from 37,111 to 19,243). We include the weighted models in Appendix Section 2, Subsection 2.6.

3.1.1 | Dependent variable

For the dependent variable, we rely on the binary variable capturing participation in the last general elections in the United Kingdom, dropping the ineligible to vote and missings/refusals. In the BHPS, this question was asked in all waves, while only present in election-year waves in UKHLS (which may take place in the immediately following year due to interview dates). For reasons of comparability and to minimise recall issues, we restrict the BHPS sample to election-year waves. Therefore, we rely on turnout data for BHPS waves 2 (1992), 7 (1997), 11 (2001), 15 (2005), and UKHLS waves 2 (2010–2011), 7 (2015–2016), 9-10 (2017–2018), and 11 (2019–2020). We report information on variation and transitions in Tables 2a and b.

3.1.2 | Unemployment scars

Our focal independent variable is the presence of unemployment scars, which we construct as a binary variable (absorbing state, meaning that once the value of the variable shifts from 0 to 1, it stays 1 afterwards, Ludwig & Brüderl, 2021), to capture when the respondent exhibits the first observed transition into unemployment. Therefore, the respondents exhibit 0 if they have never experienced unemployment within the entire observed period (not restricting the sample only to election years), and 1 if they have experienced unemployment at least once during the entire observed period (1991–2020). The underlying rationale is that the first unemployment spell is considered as the most disruptive in the literature, while subsequent ones create a sense of habituation (Clark et al., 2001; Knabe & Rätzel, 2011; Laurence, 2015; Rosenstone, 1982). For purposes of robustness, we replicate the main analysis while including the cumulative number of unemployment spells and operationalising unemployment scars as dynamic (Appendix Subsections 2.4, 2.10).

We build the focal covariate from *njusp* in BHPS and *nunmpsp* in UKHLS, capturing any unemployment spells occurring between two subsequent interview waves. A potential issue is timing: if we refer to the scar variable during the same wave in which turnout is measured, the unemployment spell may occur *after* the last elections, thus risking reverse causality. To address this issue, we rely on the value of the unemployment scarring variable measured in the year before the elections. This time adjustment also addresses potential issues of collinearity with current employment status, examined in Appendix Subsection 2.9. As for turnout, information on variation and transitions is reported in Tables 2a and b. We also address in Appendix Subsection 2.5 whether the impact on turnout lasts only in the short-term or whether it has medium and long-term effects.

3.1.3 | Age

In line with the literature (Emmenegger et al., 2017), we further restrict the sample to citizens aged 18–65, to ensure their eligibility to vote, that they are not retired, and that they could be potentially in the workforce. We treat age as

TABLE 1 Descriptive statistics.

	Observations	Mean/Percent	SD	Min	Max
Turnout	37.711	0.748	0.434	0	1
Age	37.711	40,656	11,616	18	65
Age-squared	37.711	1787.806	957,408	324	4225
Unemployment scar (0-1)	37.711	0.239	0.426	0	1
Cumulative unemployment spells	37.711				
No spells	27.717	73.50%			
1 spell	4.477	11.87%			
2 spells	2.383	6.32%			
3 spells	1.223	3.24%			
4 spells	658	1.74%			
5+ spells	1.253	3.32%			
Time since unemployment scarring	12.922				
Before treatment	3.872	29.96%			
Treatment year	985	7.62%			
1–5 Years	2.762	21.37%			
6–10 Years	2.599	20.11%			
11–15 Years	1.604	12.41%			
16–20 Years	467	3.6%			
21+ years	633	4.9%			
Social class of respondent (NS-SEC)	37.711				
Large employers & higher management	1.156	3.07%			
Higher professional	2.257	5.98%			
Lower management and professional	8150	21.61%			
Intermediate occupations	4.542	12.04%			
Small employers and own account	2.842	7.54%			
Lower supervisory and technical	2.907	7.71%			
Semi-routine	4.669	12.38%			
Routine	3.358	8.90%			
Missing social class	7830	20.76%			
Highest educational qualification	37.711				
Tertiary degree	6.298	16.70%			
Post-secondary degree	3.546	9.40%			
A-levels or equivalent	8.537	22.64%			
GCSE/O-levels or equivalent	9.806	26.00%			
Only compulsory education	3.945	10.46%			
Missing/No qualification	5.579	14.79%			
Marital status	37.711				
Never married/In union	9.991	26.49%			
Married/In union	22.59	59.90%			
Separated/Divorced	4.623	12.26%			
Widow/er	507	1.34%			

TABLE 1 (Continued)

	Observations	Mean/Percent	SD	Min	Max
Current employment status	37.711				
Self-employed	3.595	9.53%			
Employee	26.089	69.18%			
Unemployed	1.591	4.22%			
Outside labour force	5.523	14.65%			
In education/Training	913	2.42%			
Sex (self-identified)	37.711				
Man	17.384	46.10%			
Woman	20.327	53.90%			

Notes: Descriptive statistics.
Data Source: British Household Panel Survey and Understanding Society Harmonised Dataset (1991-2020).

quadratic, reflecting established non-linear trends in turnout (Plutzer, 2002; Smets & Van Ham, 2013). For robustness, we also rely on doubly-demeaned age (Giesselmann & Schmidt-Catran, 2022), and age as categorical in Appendix Subsection 2.3, and show the distribution of unemployment experiences by age group in Appendix 2.11.

3.1.4 | Socio-demographic controls

Following literature practices (Smets & Van Ham, 2013), we rely on the following socio-demographic controls: NS-SEC social class, the highest level of educational qualification, marital status, self-identified sex, current employment status, and gross pay at the last payment. The last variable is standardised in deciles for each wave, and includes a further category for missing/inapplicable values (22%). Descriptive statistics can be found in Table 1.

3.2 | Analytical strategy

Our main analytical strategy relies on three approaches.

First, we follow Emmenegger et al. (2017) by relying on Propensity Score Matching with Mahalanobis rebalancing on key variables. We gauge Average Treatment Effects on the Treated (ATTs) while controlling for pre-treatment socio-demographic controls (Aassve et al., 2007). We do so for the entire sample, and then for specific age groups to test the second hypothesis: individuals 18–25 and 18–35, accounting for shorter and longer windows of impressionable years; individuals 36–55, representing post-socialisation prime-age workers, and 56–65 capturing older workers.

Secondly, we rely on panel Linear Probability Models with Individual Fixed Effects, regressing electoral participation on unemployment scars, age, socio-demographic controls, including Fixed Effects (FEs) for Period (decades, to ensure that at least two waves are included in each period) and government region, and clustering robust Standard Errors around respondents. The purpose of these FEs models is to control for the time-invariant unobserved heterogeneity at the individual level (Imai & Kim, 2019). By relying on the individual FEs, we can focus on the *within-variation* in unemployment scars and in the dependent variable, as done for instance by Brand and Burgard (2008), Wiertz and Rodon (2021) and Österman and Brännlund (2023). According to Imai and Kim (2019), individual FEs are applicable if the treatment does not depend on past outcomes. In our context, it is likely that past turnout behaviour does not directly lead to job loss (especially considering the region and period FEs), making individual FEs applicable (Imai & Kim, 2019).

TABLE 2 Panel statistics for focal variables, (a) variances and (b) transitions.

Table 2a

	Mean	SD	Min	Max	Obs - Total (Unique, T-bar)
Turnout					
overall	0.75	0.43	0	1	37,111 (11,375, 3.31)
between		0.35	0	1	
within		0.28	−0.13	1.61	
Unemployment scar (0-1)					
overall	0.24	0.43	0	1	37,111 (11,375, 3.31)
between		0.36	0	1	
within		0.21	−0.65	1.1	

Table 2b

Turnout	0	1	Total
0	74.92%	25.08%	100%
1	16.31%	83.69%	100%
Unemployment scar (0-1)			
0	95.47%	4.53%	100%
1	0%	100%	100%

Notes: Descriptive statistics.

Data Source: British Household Panel Survey and Understanding Society Harmonised Dataset (1991–2020).

A further reason to employ individual FEs is related to the second hypothesis: the substantive interest on age entails that we incur in the famous Age-Period-Cohort problem: given their linear mathematical relationship, including them simultaneously entails perfect multicollinearity (Glenn, 1976). Disentangling them is considered almost impossible (Luo, 2013). As articulated by Ludwig and Brüderl (2021), panel models with individual FEs can circumvent the problem: as birth cohort is time-invariant, it would be entirely removed. If complemented with Period FEs, these models would capture more precisely the Age effects. Notably, these approaches also have the advantage of controlling for any unemployment spells experienced by the older cohorts before entering in the study: as said number is time-invariant, it is captured by the individual FEs, statistically making the first transition into unemployment equivalent across ages.

Third, the individual FEs models assume linearity across slopes, that is, that the dependent variable changes at the same rate for all groups (Ludwig & Brüderl, 2021). However, turnout may not change linearly over time at different ages (Emmenegger et al., 2017). For this reason, we rely on Linear Probability Models with Individual Fixed Effects and Individual Slopes (Gangl, 2022), which allow variation in slopes, which we will include for age. As a drawback, the model requires at least 3 observations per respondent (Brüderl & Ludwig, 2015), limiting further the sample size.

4 | RESULTS

Furthermore, we complement these three approaches with several robustness checks, summarised in the Results subsection 4.2, and discussed in detail in Appendix Section 2. These checks largely support the results of the main analysis, as discussed in Appendix Section 2.1. For our analyses, we rely on STATA 17 and its following commands: *radiusmatch*; *reghdfe*; *xtfeis* (Ludwig, 2015). Appendix: *regress*; *logistic*; *xtlogit*, *fe*; *stcox*.

4.1 | Descriptive results

We first address the hypotheses descriptively: Figure 1 shows the average voter turnout by age, overall (left) and disentangling by the presence of an unemployment scar (right). Considering the average turnout by age, the pattern clearly aligns with research on age and electoral participation: it starts around 55%, grows to 75% at age 40, and crosses 85% after age 60. However, this pattern masks differences associated with unemployment scars: the average turnout at age 20 is 60% for those who have never experienced unemployment scars, while it is around 45% for those who did. Both groups show increases in average turnout at higher ages, with the difference shrinking more powerfully after age 35, in line with an extended political socialisation window. Even at the descriptive level, these patterns show a clear difference in average turnout associated with unemployment scars, which is stronger at younger ages.

4.2 | Electoral participation, unemployment, and age, Propensity Score Matching

Does this descriptive result hold when employing more rigorous models? Table 3 shows the Average Treatment Effects on the Treated for unemployment scarring and electoral participation, through Propensity Score Matching with Mahalanobis rebalancing, pre-treatment socio-demographic controls, and region and period FEs. For robustness, we bootstrap the Standard Errors 100 times, and report the associated parameters.

Starting with the entire sample, the unemployment scar ATT is around −2.9%, significant at the $p < 0.001$ threshold, which is largely supported by the bootstrapping both in terms of magnitude and statistical significance. This first result supports Hypothesis 1, albeit with a limited effect size (−0.029/0.434 = 6.7% SD of turnout). As regards the role of age, Table 3 shows that the ATT is largest (−0.082%, −19% SD) in the youngest age group (18–25), gradually weaker in the group up to 35 (−8% SD), and lower but significant between 36 and 55 (−6% SD). In contrast, the ATT

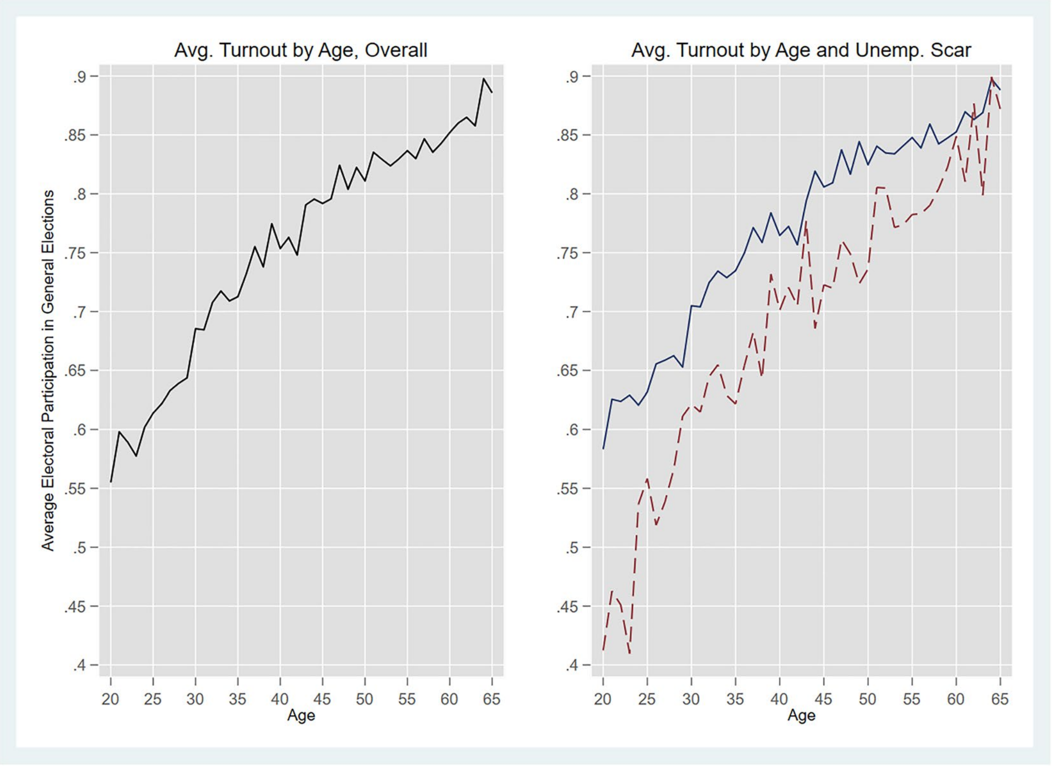

FIGURE 1 Average electoral participation by age, overall and by unemployment scar. Descriptive averages of turnout by age, and unemployment scar (0, solid blue line; 1, dashed red line). *Data source*: British household panel survey and understanding society harmonised dataset (1991–2020).

TABLE 3 Electoral participation, unemployment, and age, propensity score matching.

	Treatment: Unemployment scar (0-1); DV: Turnout				
Age	All	Up to 25	Up to 35	36–55	56-65
ATT (Base)	−0.029***	−0.082***	−0.034***	−0.026***	+0.014
	(0.008)	(0.023)	(0.014)	(0.010)	(0.019)
N	37,633	4278	13,494	19,636	4503
Bootstrapping × 100					
Avg. ATT	−0.029***	−0.076***	−0.034*	−0.030*	−0.002
Avg. SE	0.009	0.022	0.015	0.012	0.024
Avg. *p*-value	0.000	0.000	0.050	0.050	0.910
ATT 2.5th pct	−0.048	−0.119	−0.073	−0.059	−0.041
ATT 5th pct	−0.045	−0.108	−0.066	−0.053	−0.039
ATT 95th pct	−0.016	−0.041	−0.012	−0.007	+0.035
ATT 97.5th pct	−0.101	−0.030	−0.009	−0.005	+0.049

Note: Standard Errors in Parentheses. Propensity Score Matching, with age and pre-treatment socio-demographic controls. Region and Period Fixed Effects included. Bootstrapping executed 100 times. Mahalanobis rebalancing on Age, Education, Social Class, Sex.

*p < 0.05, **p < 0.01, ***p < 0.001.

Data Source: British Household Panel Survey and Understanding Society Harmonised Dataset (1991–2020).

is positive and not significant in the oldest age group. Considering the bootstrapped results, they support magnitude and significance for the 18–25 group, while the second and third groups are marginally significant. These results support Hypothesis 2, with the effects being stronger at younger ages, weakening at older ages, and reaching a positive non-significant effect in the oldest age group.

4.3 | Electoral participation, unemployment, and age, individual FEs models

Table 4 reports the results of the Linear Probability Models with Individual FEs (and Individual Slopes), respondent cluster-robust SEs, region and period FEs, and socio-demographic controls.

We here focus on the key covariates, and present full results in Appendix Section 1. Starting from the *Base* models, we can see that experiencing unemployment for the first time changes electoral participation by around −2.1% (5% SD) for both FE and FEIS models. However, statistical significance differs, with the FE coefficient being significant at the 0.05 threshold, and the FEIS coefficient being not, providing mixed support for Hypothesis 1.

Turning to the role of age, the FE *Interactions* specification reports the interactions between unemployment scar and age, and age-squared, both significant at the $p < 0.01$ threshold. These interactions suggest that the impact of a scar is more negative at younger ages, but that this effect is curvilinear. To better gauge this pattern, we depict in

TABLE 4 Electoral participation, unemployment, and age, individual fixed effects models.

	Voter turnout in latest general elections				
	FE	FE	FEIS	FEIS	FEIS
Dependent variable	**Base**	**Int.**	**Base**	**≤35**	**≥36**
Unemployment scar (0–1)	−0.022*	−0.274*	−0.021	−0.070*	0.007
	(0.009)	(0.079)	(0.016)	(0.034)	(0.022)
Age of respondent	0.005*	0.003			
	(0.002)	(0.002)			
Age squared	−0.000*	−0.000			
	(0.000)	(0.000)			
Unemp. Scar × Age		0.012**			
		(0.004)			
Unemp. Scar × Age squared		−0.0001**			
		(0.00004)			
Unit (respondent) fixed effects	Yes	Yes	Yes	Yes	Yes
Fixed effects with individual slopes (age)	No	No	Yes	Yes	Yes
Region and period fixed effects	Yes	Yes	Yes	Yes	Yes
Socio-demographic controls	Yes	Yes	Yes	Yes	Yes
Total respondents	37,711	37,711	29,803	6975	17,180
Unique respondents	11,375	11,375	7421	2091	4555
Obs. per respondent (min.)	2	2	3	3	3
Obs. per respondent (avg.)	3.3	3.3	4	3.3	3.8
Obs. per respondent (max.)	9	9	9	6	8

Note: Respondent Cluster-Robust Standard Errors in Parentheses. Panel Linear Probability Models with: FE – Individual (Respondent) Fixed Effects; FEIS - Individual Fixed Effects with Individual Slopes.

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Data Source: British Household Panel Survey and Understanding Society Harmonised Dataset (1991–2020).

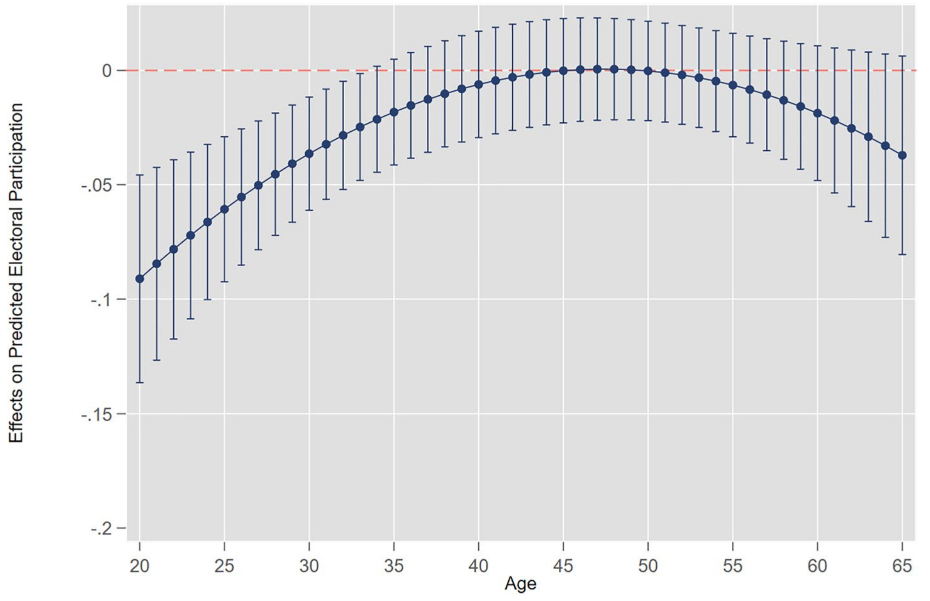

FIGURE 2 CMEs on Predicted Electoral Participation, by Unemployment Scar and Age (FE). Conditional Marginal Effects on Electoral Participation with 95% Confidence Intervals, for the interaction between Unemp. Scar and Age Squared. Computed after Panel Linear Model with Individual Fixed Effects (**FE** *Interactions*) in previous Table.

Figure 2 the Conditional Marginal Effects with 95% Confidence Intervals for the focal relationship, with the same-age non-scarred as the baseline.

The pattern in Figure 2 is clear: if the first transition into unemployment occurs at age 20, it changes probability of voting by around −9% (−21% SD). This impact decreases as age increases, being still sizeable at age 34 (−2.4%, −5.5% SD), and ceasing to be significant at age 35. While the effect eventually amplifies again, the 95% CIs systematically cross the zero line. This pattern is corroborated by the FEIS models in Table 4 by age group: the impact of an unemployment scar on electoral participation is −7% (−16% SD) and significant at the 0.05 threshold for those under 35, and is positive and not significant for 35 and over. Thus, both FE and FEIS models support Hypothesis 2: the impact of unemployment scars on electoral participation is stronger at younger ages, and not-significant after age 35.

4.4 | Robustness checks and additional analyses

To assess the robustness of our results, we conduct several robustness checks and additional analyses. More specifically, we rely on cross-sectional LPM and logistic regressions, panel Conditional Logistic Regressions, alternative specifications for unemployment and for age, and by conducting an additional analysis on whether unemployment effects last in time, following Ludwig and Brüderl (2021). For the sake of brevity, we focus here on two key robustness checks, and refer to Appendix Section 2, Subsection 2.1 for a more detailed discussion of the entire set of results.

Appendix Subsection 2.4 reports the results of employing cumulative unemployment spells as the focal covariate instead of the binary unemployment scar. The FE models suggest that only the first unemployment spell matters, and that the effect is stronger under the age of 35. The FEIS models show a similar pattern, but also suggest that the second spell matters, while the first is only significant at the 0.1 threshold. This contrast across models may be due to the smaller sample sizes for the FEIS models requiring at least 3 observations, but still support both Hypotheses 1 and 2, with the older groups reporting no statistically significant effect.

Furthermore, are there any scar effects for these unemployment experiences? Appendix Subsection 2.5 shows the results restricted only to the treated, considering the '*Before Treatment*' values as the baseline, and separating the '*Treatment Year*' from subsequent years, grouped due to the structure of our data (restricted to interviews taking place at most 1 year after the last elections). For the FE models, we can see there is no effect for the baseline, while there is a scar effect lasting between one to five years for the under 35. Remarkably, there are positive effects on turnout for those 36 and older, at least 11 years after the unemployment experience. Within the FEIS models, there is a scar effect in the treatment year for the baseline (albeit $p < 0.1$), and there are scar effects for the under 38[2] for the one-to-five years later (−8.7%, 19% SD $p < 0.05$). The positive effects for the older age groups found with FE disappear with FEIS. Together, the results of the robustness checks provide consistent support for both Hypotheses, except for Hypothesis 1 in the Event Study, which focuses only on the treated.

5 | DISCUSSION AND CONCLUSION

In this article, we contribute to research on labour market disadvantage and electoral participation in two ways. First, we find that unemployment experiences depress electoral participation in the United Kingdom general elections, with effect sizes between 5% and 7% of a SD in the dependent variable. This result is robust across statistical approaches including contextual Fixed Effects and socio-demographic controls, except for the Fixed Effects with Individual Slopes, and Event Study. This novel finding on the impact of unemployment in the British context aligns with previous panel data analyses in Germany (Emmenegger et al., 2017) and Sweden (Österman & Brännlund, 2023; Österman & Lindgren, 2021), and with cross-sectional data for 26 European countries (Azzollini, 2021). The pattern that cumulative spells do not matter beyond the second supports the psychological mechanism of within-person habituation (Rosenstone, 1982), suggesting the first experience disrupts the most (Laurence, 2015).

Our second contribution focuses on the life-cycle: consistently across the main analysis and the robustness checks, the impact of unemployment experiences is stronger at younger ages, with effect sizes ranging up to −21% SD at age 20. In contrast, these impacts are weaker after 35, reaching negligibility and non-significance between 56 and 65. For the younger groups, these effects do also last in time, up to 5 or 10 years after the first unemployment spell, highlighting how the impact on turnout may extend in some cases to the medium/long term.

How can we explain this differential impact across the life course? A likely answer is that the mechanisms linking unemployment to turnout are deeply shaped within the '*impressionable years*' timeframe (Smets, 2016) and are largely neutralised afterwards. The electoral participation of never-unemployed older individuals may therefore be protected by their accumulated socio-economic and political advantage: their more established voting habits (Plutzer, 2002), relatively higher resources (Brady et al., 1995) and a more clearly defined socio-occupational identity given their orderly career trajectory (Alford, 1967; Lipset, 1960; Wilensky, 1961), more developed external and internal political efficacy (Emmenegger et al., 2015, 2017; Marx & Nguyen, 2016), and a more structured network of social ties (Brand & Burgard, 2008; Rosenstone, 1982). A further potential explanation comes from comparing the results for the 36–55 age group, which are significant when we do not fully account for time-invariant unobserved heterogeneity (PSM) and non-significant when we do (FE, FEIS). This discrepancy suggests that the lack of significance in the FE models may be due to time-invariant factors relevant for electoral participation, such as social origins (Jeannet, 2022; Plutzer, 2002), personality (Emmenegger et al., 2017b), and birth cohort (Alwin & Krosnick, 1991; Grasso et al., 2019; Neundorf & Niemi, 2014). Empirically, related panel data studies find that unemployment experiences do not affect social participation after age 54 (US, Brand & Burgard, 2008), and political participation after ages 35 (Germany, Emmenegger et al., 2017) and 39 (Sweden, Österman & Brännlund, 2023), albeit with a smaller magnitude for the latter paper.

Therefore, these results corroborate the theoretical framework developed by Emmenegger et al. (2017) on the joint impact of unemployment and the life-cycle on turnout, but also advance it empirically: while they rely primarily on Propensity Score Matching, this study combines PSM with the more demanding Individual FEs (Imai & Kim, 2019) employed by Österman and Brännlund (2023), and with FEs with Individual Slopes (Ludwig & Brüderl, 2021), which constitute a scarcely applied but innovative approach for longitudinal studies (Gangl, 2022).

While it is reassuring to find milder to null effects after 35, this differential impact is worrisome. Young individuals are typically classified as labour market outsiders (Biegert, 2019; Esping-Andersen, 1999; Schwander & Häusermann, 2013), and thus disproportionately likely to experience unemployment. In the UK context, youth unemployment has been systematically higher than the prime-age figure since the early 1990s (ONS Unemployment Statistics, 2021). In our sample, survival analysis shows this is also the case (Appendix Subsection 2.7), with younger individuals being more likely to experience the first transition into unemployment, but with the proportion of unemployment scarring substantially stable across age groups (Appendix Subsection 2.11). Thus, this study highlights another facet of the insider-outsider divide in politics (Lindvall & Rueda, 2014; Rovny & Rovny, 2017), showing how the economic outsiderness of key demographic groups extends to the political domain.

Furthermore, said unemployment scars are considerably harmful for citizens in the *'impressionable years'* window of political socialisation, considering that turnout is particularly habit-forming, path-dependent, and developmental (Alwin & Krosnick, 1991; Neundorf & Niemi, 2014; Plutzer, 2002). Indeed, the Event Study results show that the scar effects of unemployment last up to 5 years later, and in some cases up to 10 years later. While the ageing effect eventually compensates these scar effects, socio-economic disadvantage and lower turnout combine in a *double disadvantage*, with the socio-economically vulnerable being doubly politically marginal during a key timeframe. This double disadvantage constitutes another iteration of the '*unresolved dilemma of democracy*' described by Lijphart (1997). This could turn into a vicious circle of cumulative disadvantage generating inequality over the life-course (DiPrete & Eirich, 2006), if the lack of representation, even if temporary, does permanently worsen socio-economic conditions for the scarred.

A key limitation of this study relates to the dependent variable: turnout over-reporting. This widespread survey issue is typically driven by contextual social norms and individual characteristics (Karp & Brockington, 2005; Sciarini & Goldberg, 2016). In the UK case, however, analyses comparing validated turnout and reported turnout highlight that the differences are not worrisome (Clarke et al., 2006; Prosser et al., 2020). To mitigate this issue, we control for socio-demographic characteristics and include region and period FEs to capture contextual social norms (Karp & Brockington, 2005), with the Individual FEs capturing any time-invariant characteristic leading to over-reporting. Another main limitation is external validity: we focus on a single country, the United Kingdom. Given the longitudinal focus of this study, this analysis builds on existing work on the Netherlands, Germany, and Sweden relying on panel datasets (Emmenegger et al., 2015, 2017; Wiertz & Rodon, 2021; Österman & Brännlund, 2023), which are not available for most countries. Still, the United Kingdom is not a dualised labour market economy (Biegert, 2019), whereas other countries (*e.g.*, Italy and Spain) present profound differences between young and prime age workers (Barbieri et al., 2019). There, higher youth unemployment may either mitigate or exacerbate the focal relationship (Azzollini, 2021; Österman & Lindgren, 2021), with the extent of moderation to be assessed by future research. Relatedly, future research may further explore how the mechanisms linking unemployment to turnout are affected by the life-cycle, potentially with qualitative methods.

In conclusion, this article examines the impact of a trigger event (DiPrete, 2002; Gangl, 2004) that disrupts electoral participation, through a life-course perspective (Billari, 2005; Giele & Elder, 1998). To do so, it builds on the framework by Emmenegger et al. (2017), advancing it through a broader set of panel data techniques. In future research, this framework may be expanded to other socio-political outcomes characterised by political socialisation, such as the development of political preferences, participation in civil society, and party choice. Thus, this study illuminates the centrality of the life-course perspective to better understand the relationship between labour market disadvantage and socio-political behaviour.

ACKNOWLEDGEMENTS

The author thanks for feedback on the paper the editor, two anonymous reviewers, as well as: Delia Baldassarri, Francesco Billari, Danilo Bolano, Richard Breen, Alessandro Di Nallo, Gosta Esping-Andersen, Geoffrey Evans, Malcolm Fairbrother, Anne-Marie Jeannet, Paul Marx, Giacomo Melli, Brian Nolan, Stefani Scherer, the participants of the RC28 2022 Spring Meeting and of the ECSR 2022 General Conference, the members of the DisCont (DONDENA Research Centre – Bocconi University) reading group, and the participants of the Politics and Society workshops at the Universities of Milan and Duisburg-Essen. This work was supported by funding from the ERC Synergy Project DINA (Towards a System of Distributional National Accounts, Grant n. 856455) and from a Leverhulme Trust Grant for the Leverhulme Centre of Demographic Science.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in UK Data Service at https://ukdataservice.ac.uk/.

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ENDNOTES

[1] In this paper, we refer to both unemployment scars and scar effects of unemployment. To avoid confusion, we clarify their usage: unemployment scars refer to past experiences of unemployment, measured as 0-1 in the main analysis, or as cumulative spells in the robustness checks. In contrast, the scar effects of unemployment refer to any long-lasting impact of unemployment experiences on electoral participation. In statistical terms, unemployment scars represent the value of the independent variable, while the scar effects represent the coefficient within the Event Study robustness check.

[2] Given the at least 3 observations required by the FEIS models, the sample size loss driven by focussing only on the eventually treated entails a conformability error in *xtfeis* when trying to estimate the regression up to age 35 (as well as 36 and 37). Estimation is possible when expanding the age threshold up to 38, and similar coefficients are found if we move it to ages 39 and 40.

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How to cite this article: Azzollini, L. (2023). Doubly disadvantaged: Unemployment, young age, and electoral participation in the United Kingdom. *The British Journal of Sociology*, 1–20. https://doi.org/10.1111/1468-4446.13039