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RESEARCH ARTICLE

Unemployment and Social Participation: the joint role of Individual and Contextual Unemployment in Europe

Leo Azzollini
University of Oxford

ABSTRACT: How does unemployment affect social participation? A considerable body of work has analysed the scar effects of unemployment on social participation and exclusion, which are important antecedents of civic and political participation. However, this literature has scarcely addressed the moderating role of contextual unemployment. In this article, we extend a theoretical framework positing that unemployment scars decrease social participation, and that those individual effects are moderated by contextual unemployment. We test these hypotheses relying on Rounds 4–9 (2008–2018) of the European Social Survey, for 33 countries, and more than 100 sub-national units including macro-regions (NUTS1) and regions (NUTS2), measuring participation as the frequency of social meetings with relatives/friends/colleagues. Results from linear regressions with context-year Fixed Effects indicate that those with longer and more recent unemployment experiences participate less socially. However, these individual negative effects vary powerfully according to the contextual unemployment rate: the scar effects of unemployment on social participation are strongest where unemployment rates are smaller, and almost zero and not statistically significant where they are higher. These findings highlight the joint centrality of individual and contextual unemployment to illuminate social participation.

KEYWORDS: European Social Survey, Social Participation, Social Stratification; Unemployment Rate; Unemployment Scarring.

CORRESPONDING AUTHOR: Leo Azzollini, leo.azzollini@spi.ox.ac.uk

1. Introduction

How does unemployment affect social participation? Since classic studies in sociology this question has been central for the literature, as jobs shape the social integration of citizens (Durkheim 2000 [1893]; Weber 2013 [1922]), and that social participation is a component of the broader concept of social capital (Coleman 1988; Putnam 2000), which is in turn fundamental for democracy (Newton 1997; Skocpol 1999; Uslaner 1999;

Paxton 2002; Alteri *et al.* 2008; Maraffi *et al.* 2008). Given the joint centrality of unemployment and social participation for societal outcomes, understanding how they are related is crucial: if unemployment depresses social participation, there is a risk of a vicious circle arising between labour market disadvantage and social exclusion (Gallie, Paugam, and Jacobs 2003), potentially leading to societal atomisation (Melucci 1996).

Beyond the concrete risks posed by social exclusion, this vicious circle may extend also to civic and political participation: as extensively argued in the literature, social participation is fundamental for the participation in civil society *fora* (Habermas 1991 [1962]; Eder 2014). Indeed, family, social, and civic participation together are considered as the "*three spheres of sociability"* (Gallie, Paugam, and Jacobs 2003), which are deeply intertwined. Therefore, exploring the focal relationship is even more salient in the context of the Covid-19 pandemic, where the increasing unemployment and social exclusion may exacerbate the threat Covid-19 poses to contemporary liberal-democratic societies (Alteri, Parks, Raffini, and Vitale 2021).

From the Marienthal study (Jahoda *et al.* 2017 [1933]) to more recent works (Brand 2015; Eckhard 2020), research finds this risk is concrete: unemployment experiences depress social participation, through mechanisms related to social stigma and financial deprivation (Gallie *et al.* 1994, 2003; Paugam and Russell 2000; Julkunen 2002). Beyond the effects of current unemployment, this literature has focused on an increasingly salient phenomenon in social science: the scar effects of unemployment (Clark *et al.* 2001; Arulampalam 2001; Gangl 2006). A voluminous body of research establishes that past experiences of unemployment generate long-lasting hardships across several socio-economic domains, from labour market to health, family, social trust, and political engagement (Mooi-Reci and Ganzeboom 2015; Laurence 2015; Pearlman 2015; Ardito *et al.* 2017; Heggebø and Elstad 2018; Emmenegger, Marx, and Schraff 2015, 2017; Mewes *et al.* 2021; Azzollini, 2023).

As regards social participation, researchers have identified a scarring effect of unemployment through panel data across the United States (Brand and Burgard 2008) and Germany (Sonnenberg 2014; Kunze and Suppa 2017; Pohlan 2019; Eckhard 2020). Despite the robust evidence on the individual-level effect, there is scarce research on how contextual characteristics moderate the relationship between unemployment experiences and social participation. This is problematic: as pointed out by Gallie, Paugam, and Jacobs (2003), the risk of a vicious circle between unemployment and exclusion depends on contextual factors. Among others, the contextual unemployment rate has emerged as a central moderator for the scar effects of unemployment in other domains, with studies finding that higher unemployment rates mitigate the individual impact on well-being (Clark 2003), on health (Heggebø and Elstad 2018), and on political trust and participation (Marx and Nguyen 2016; Giustozzi and Gangl 2021; Azzollini 2021). If these macro-micro effects exist for several socio-political outcomes, it is possible that the interaction between contextual and individual unemployment shapes social participation.

Among the few studies working on this topic from a macro-micro perspective, Julkunen (2002) and Dieckhoff and Gash (2015) find that macro-social characteristics as a strong welfare system mitigate the effects of unemployment on social participation, but do not find effects for the unemployment rate. These studies cover the period of the late 1990s in the Nordic countries and Scotland (Julkunen 2002), and 22 countries with the 2006 EU-SILC (Dieckhoff and Gash 2015). Afterwards, to the best of our knowledge no study has directly examined the moderating role of context on the individual relationship in a cross-national setting. A partial exception is represented by Kunze and Suppa (2017), who find that higher unemployment rates at the regional level in Germany decrease the impact of unemployment. This is problematic, as the lack of clarity on the role of unemployment at the macro-level units of analysis hinders comparison across contexts (De Nardis 2014), conflating different patterns at the individual-agent and contextual-structure levels (Sewell 1992), with potential atomistic and ecological fallacies (Robinson 1950).

In this paper, our goal is to address these gaps in the literature, by assessing the scar effects of unemployment on social participation and whether their contextual unemployment rates moderate those scarring effects. We pursue this goal in two ways. First, at the micro-level, we posit that past experiences of unemployment have a scarring effect on social participation in Europe and neighbouring countries, expanding the geographical focus to 33 countries, 105 macro-regions (NUTS1) and 230 regions (NUTS2) between 2008 and 2018. Second, at

the macro-micro level, we examine the differential impact of unemployment scars on social participation across countries, depending on the contextual unemployment rates at the three geographic levels. To do so, we rely on multilevel data from Rounds 4-9 of the European Social Survey (2008-2018), employing linear regressions with context-year Fixed Effects for each geographic level, and then by conducting separate regressions for different contexts depending on their associated unemployment rate.

2. Theoretical Framework

2.1 Micro: Unemployment and Social Participation

Since classical sociology, occupations have been considered as the basis of the social order (Durkheim 2000 [1893]), as they shape both the social position and the integration of citizens within society (Weber 2013 [1922]; Jahoda *et al.* 2017 [1933]; Wilensky 1961). Therefore, the relationship between the unemployment and social participation has long been central to sociology: in the Marienthal study and subsequent works Jahoda and coauthors (2017 [1933]; 1981) find that unemployment not only shapes material deprivation, but also depresses psychosocial needs, leading to social isolation. The relevance of this relationship is clearly highlighted by Gallie *et al.* (2003): given that social participation is intertwined with social capital (Coleman 1988), with weak ties facilitating labour market re-integration (Granovetter 1973), there is a concrete risk of a vicious circle arising between labour market and social marginalities (Gallie *et al.* 2003), potentially hampering important civil society *fora* (Habermas 1991 [1962]; Eder 2014).

To define social participation, we rely on the classification of the "*three spheres of sociability*" developed by Gallie, Paugam, and Jacobs (2003): primary participation relates to participation in the household/family life, secondary participation relates to informal social activities in the local community, and tertiary participation relates to formal activities in associations or clubs. These three spheres of sociability by Gallie *et al.* (2003) can be equated with the three types of social capital (Woolcock 2001): bonding (strong ties, typically in the family), bridging (weaker ties from social activities), and linking (defined by positions of power, Woolcock 2001). Thus, civic participation patterns are intertwined with power and political efficacy (De Tocqueville 2000 [1835]; Verba, Schlozman, and Brady 1995). Most of the literature relies on different combinations of these three spheres, either pooling them together (Julkunen 2002), or examining them separately (Dieckhoff and Gash 2015; Kunze and Suppa 2017). In this paper, we will focus on the first two spheres of sociability, and do not directly consider the third sphere (civic participation), whose multiple forms and complex underpinning mobilization mechanisms require further theorization and analysis.

Most research concurs that the aforementioned vicious circle materialises in society: unemployment leads to social isolation (Brand 2015; Eckhard 2020), although a minority strand argues that the impact is not always clear-cut (Rözer *et al.* 2020). The majoritarian argument is substantiated by cross-sectional evidence: unemployment is associated with lower social participation levels, both formal (civic associations) and informal (social activities) across several countries in Europe (Diekchoff and Gash 2015). Relying on ECHP data, Paugam and Russell (2000) find consistent evidence of lower formal participation across 11 European countries, and context-dependent evidence on informal participation, with the unemployment-participation relationship being strongest in Germany. They highlight social stigma as the mechanism, as Germany constituted the country where the unemployed felt most stigmatised. Similar effects were found by Julkunen (2002) for both formal and informal social participation through an original survey: focusing on young individuals in Nordic countries and Scotland, she finds that unemployment experiences lasting more than a year depressed social participation. The results for Scotland are corroborated by Lindsay (2010), finding that the long-term unemployed in Scotland and the wider United Kingdom were less likely to engage in social activities. Dieckhoff and Gash (2015), relying on 2006 EU-SILC data, find that unemployed individuals who had been so for at least 6 months in the previous year were consistently less likely to participate socially, both formally and informally.

In parallel with the cross-national and cross-sectional evidence, a stream of research has focused towards establishing the relationship in a more causal way. This strand of research has largely focused on panel data and plant closures in single-country settings (Brand and Burgard 2008; Sonnenberg 2014; Brand 2015; Kunze and Suppa 2017; Pohlan 2019; Eckhard 2020), consistently finding that unemployment depresses social participation. More specifically, Brand and Burgard (2008), relying on the Wisconsin Longitudinal Study for the 1939-1940 cohorts, find that unemployment depresses social participation, but that this effect is magnified when experienced in the prime earning years, and mitigated when approaching retirement. Sonnenberg (2014), relying on the German Socio-Economic Panel (GSOEP) for 1994-2009, finds that unemployment is longitudinally associated with lower social participation through non-material losses, while compensating for this with higher frequency of meetings with friends and family. Relying again on the GSOEP (2014), Kunze and Suppa (2017) find that unemployment depresses social participation overall through individual fixed effects, however finding similarly to Sonnenberg (2014) that unemployment increases socialisation with family and friends. Pohlan (2019), focusing on Germany with a difference-in-difference approach relying on PASS-ADIAB data, finds that job loss strongly depresses social participation, with those unemployed for more than 6 months experiencing a decrease in the number of close friends. Pohlan (2019) explains this again through the mechanism of social stigma: *"*Moreover, the psychological distress that goes along with being unemployment is compounded by the negative social attitudes towards unemployment" (Pohlan 2019, p. 276). In a further paper focusing on the German case through GSOEP (1992-2011), Eckhard (2020) connects unemployment to social isolation 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). Eckhard (2020) finds that unemployment does lead to social isolation in informal participation, and that this effect is most profound after two years of unemployment for men. Considering this stream of research, we posit that:

Hypothesis 1 – Past unemployment experiences depress social participation.

2.2 Macro-Micro: Does the Unemployment Rate Moderate the Scar Effects on Social Participation?

While the impact of unemployment on social participation at the micro-level is thoroughly established approaching causality through panel data and natural experiments, there is scarce research examining how this impact is moderated by contextual factors.

In their comparative panel study, Gallie, Paugam, and Jacobs (2003) find indeed that unemployment is not clearly linked to social participation across all countries, but that the relationship depends on the three "spheres of sociability", from family integration to informal social participation and civic participation, which differ across countries: "a person becomes unemployed in the context of a specific type of community life, and this may well be of major importance for the way unemployment affects their well-being" (Gallie *et al.* 2003, p. 15). The argument by Gallie *et al.* (2003) aligns with the analytical sociology framework (Coleman 1986; Hedström and Swedberg 1996; Hedström and Bearman 2009; Manzo 2021): macro-social phenomena and individual-level mechanisms are jointly needed to understand individual social actions, and how the latter aggregate into macro-social outcomes. Following the adaptation of this framework to the topic by Sonnenberg (2014), there is a clear rationale to assess how the individual relationship between unemployment and social participation is influenced by the macro-level labour market conditions.

Yet, the extant research on the impact of contextual factors on social participation is scarce. In the analysis of Nordic countries and Scotland, Julkunen (2002) finds that more protective welfare systems indeed cushioned the adverse effects of unemployment on participation, but that there was powerful variation also within Scandinavian countries. The article by Dieckhoff and Gash (2015) constitutes perhaps the most comprehensive macro-micro study of unemployment and social isolation: relying on 2006 EU-SILC data, they employ a two-stage multilevel model to assess the impact of contextual factors on the focal relationship, including the

national level of unemployment. They posit that higher levels of national unemployment could mitigate the adverse effects of individual unemployment: "we could expect the unemployed to feel less stimgatised about their labour market status when the national level of unemployment is high. This would lead to lower levels of social withdrawal." (Dieckhoff and Gash 2015, p. 5). However, their analysis does not univocally support the hypothesis: they find that worse socio-economic conditions and pro-redistributive attitudes respectively exacerbate and mitigate the focal relationship, but that the national unemployment rate does not moderate the latter consistently. More specifically, the impact of the unemployment rate on the individual unemployment coefficient is only statistically significant when the unemployment rate is entered as a single country predictor.

On the contrary, a moderating role is identified by Kunze and Suppa (2017). Relying on panel data from the German Socio-Economic Panel (1988-2011) and exploiting plant closures, they find that unemployment experiences depress social participation in Germany. However, when interacting the regional unemployment rate with individual unemployment, they find that the impact of the latter on social participation ceases to be significant after the unemployment rate reaches 10% (Kunze and Suppa 2017).

Beyond these two studies, evidence on the macro-micro impact of unemployment on social participation is limited. This contrasts with the broader research on the social consequences of unemployment, where the unemployment rate is considered as a central moderator (Clark 2003), together with unemployment benefits (Eichhorn 2014) and the generosity of the welfare state (Giustozzi and Gangl 2021). The centrality of the unemployment rate is linked to social stigma, with scholars highlighting the *habituation* and *status deprivation* mechanisms. The habituation mechanism was developed in research on unemployment and well-being, and it holds that unemployment hurts less when there is more of it (Clark 2003). Proponents of habituation link this to social norms and stigma. As suggested by Clark and Oswald (1994, p. 647): "it is harder to put up with unemployment if one lives in a place where few people are without a job." In such a situation, the unemployed "would be more likely to attribute their job loss to some personal failing" (Turner 1995, p. 215). On the contrary, a higher prevalence of unemployment is found to reduce adverse effects on the unemployed by reducing the stigma placed on them by society and themselves (Clark 2003), "when [job] displacement is a common occurrence, the shame associated with job loss may be ameliorated. The feeling of support due to others being in the same condition may somewhat counteract the negative economic effects." (Pearlman 2015, p. 572). This dynamic improves life satisfaction (Clark 2003), attitudes towards the unemployed (Danckert 2017), and mitigates the adverse effects of unemployment on health (Heggebø and Elstad 2018) and on electoral participation (Azzollini 2021). Symmetrically, the status deprivation mechanism applies to a scenario where economic conditions are better. Developed by Giustozzi and Gangl (2021) in their study on welfare generosity, unemployment scarring, and political trust, the mechanism holds that the scar effects of unemployment are stronger when economic conditions are better. Giustozzi and Gangl (2021) argue that "if few people experience unemployment, those citizens who actually do might feel particularly disadvantaged" (Giustozzi and Gangl 2021, p. 6).

How can we reconcile these findings on unemployment rate with the mixed evidence on its role for social participation (Dieckhoff and Gash 2015; Kunze and Suppa 2017)? The answer may lie in unit of analysis: Dieckhoff and Gash (2015) relied on the national unemployment rate and found no effect of unemployment rate, while Kunze and Suppa (2017) found that the German regional unemployment rate in moderated the relationship between unemployment and social participation. The difference is substantial: as argued by Pittau, Zelli, and Gelman (2010) and Eichhorn (2014), if the unemployment rate within the country varies powerfully, the social norms associated to employment may also vary sub-nationally. Given that in social comparison theory, friends and neighbours are the main reference group for socio-economic comparisons (Gugushvili 2021), this will have powerful implications for social participation: as citizens typically participate to social activities within their local context in the country, the social norms associated with unemployment may be shaped more powerfully by the local unemployment rate, rather than the national. Indeed, research on the civic participation of the unemployed (Chabanet and Faniel 2012) shows that regional dynamics are often more important than the national for the mobilization of the unemployed. This pattern is most evident in the case of Italy, where Baglioni (2012) highlights the process of "*counterstigmatization*": given the powerful diffusion of unemployment in the Naples area, the experience of unemployment itself was less stigmatized, facilitating

cooperation and mobilization (Baglioni 2012). Further research on the macro-micro consequences of unemployment found indeed that the adverse effects of unemployment were mitigated by higher regional unemployment in terms of life satisfaction (Clark 2003) and political participation (Azzollini 2021), although other evidence is mixed (Oesch and Lipps 2013 for Germany and Switzerland). Adapting the argument by Dieckhoff and Gash (2015) together with habituation/status deprivation mechanisms to social participation, we posit that:

Hypothesis 2 - Higher country unemployment rates mitigate the scar effects of unemployment on social participation.

Following the evidence by Kunze and Suppa (2017) and the role of regional unemployment (Clark 2003; Pittau, Zelli, and Gelman 2010; Eichhorn 2014), we posit that at the sub-national level:

Hypothesis 3 (a, b) - Higher regional (a - NUTS1, b - NUTS2) unemployment rates mitigate the scar effects of unemployment on social participation.

3. Data and Analytical Strategy

Table 1 – Descriptive Statistics

Variable	N	Mean/ Percent	SD	Min.	Max.
Frequency of Meeting Socially with Relatives/Friends/Colleagues	120,027	4.93	1.49	1	7
Never	928	0.78%			
Less than once a month	8,253	6.88%			
Once a month	11,706	9.75%			
Several times a month	25,079	20.90%			
Once a week	23,003	19.17%			
Several times a week	33,131	27.60%			
Everyday	17,924	14.93%			
Unemployment Scar	120,027	0.41	0.642	0	2
Never Scarred	80,273	67.25%			
Mild Scar (>3 Months, >1 Year not in last 5 years)	29,107	24.25%			
Severe Scar (>1 Year in last 5 years)	10,197	8.50%			
Destination Social Class (ESEC)	120,027	4.50	2.862	1	9
Large Employers, Higher Mgrs/Prof.	23,202	19.33%			
Higher Supervisors, Lower Mgrs/Prof.	23,275	19.39%			
Intermediate Occupations	10,263	8.55%			
Small Empl. and Self-Emp.	7,883	6.57%			
Small Empl. and Self-Emp. (Agri)	3,189	2.66%			
Lower Supervisors, and Technicians	9,287	7.74%			
Lower Sales and Service	19,139	15.95%			
Lower Technical	11,813	9.84%			
Routine	11,976	9.98%			
Origin Social Class (EGP)	120,027	4.60	2.539	1	9
Professional and Technical	18,161	15.13%			
Higher Administrator	6,124	5.10%			
Clerical	15,332	12.77%			
Sales	10,179	8.48%			
Service	13,507	11.25%			
Skilled Worker	19,585	16.32%			
Semi-skilled Worker	15,813	13.17%			
Unskilled Worker	9,551	7.96%			
Farm Worker	11,774	9.81%			
Labour Market Position	120,027	1.22	0.576	1	3

Paid Work	103,530	86.26%			
In Education	6,827	5.69%			
Unemployed	9,669	8.07%			
Level of Education (ES-ISCED)	120,027	4.138	1.906	0	7
Higher Tertiary (ES-ISCED V2)	17,169	14.30%			
Lower Tertiary (ES-ISCED V1)	15,686	13.07%			
Vocational Training (ES-ISCED IV)	16,238	13.53%			
Upper Secondary, U. (ES-ISCED IIIa)	27,249	22.70%			
Upper Secondary, L. (ES-ISCED IIIb)	20,761	17.30%			
Lower Secondary (ES-ISCED II)	13,108	10.92%			
Less than Low Secondary (ES-ISCED I)	3,666	3.05%			
Not possible to harmonise	6,149	5.12%			
Income Decile	120,027	5.08	3.424	0	10
Top Decile	12,213	10.18%			
Ninth Decile	11,663	9.72%			
Eight Decile	13,101	10.91%			
Seventh Decile	12,692	10.57%			
Sixth Decile	10,808	9.00%			
Fifth Decile	10,089	8.41%			
Fourth Decile	8,760	7.30%			
Third Decile	7,462	6.22%			
Second Decile	5,715	4.76%			
Bottom Decile	4,602	3.83%			
Missing Decile	22,921	19.10%			
Age	120,027	41.84	12.28	18	65
Religious	120,027	0.544	0.498	0	1
Gender	120,027	0.516	0.500	0	1
Born in Country	120,027	0.947	0.224	0	1
Ethnic Minority	120,027	0.043	0.203	0	1
Unemployment Rate (Country)	120,027	8.02%	4.03%	2.2%	25%
Unemployment Rate (NUTS1)	60,864	8.38%	5.04%	2.2%	33.5%
Unemployment Rate (NUTS2)	84,498	8.29%	4.97%	1.3%	38.5%

Notes: *Descriptive statistics with Design Weights*. **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018).*

3.1 Dataset

We rely on data from the European Social Survey (ESS), a biennial cross-national survey of attitudes and behaviour starting in 2001, which uses cross-sectional, probability samples representative of all persons aged over 15 in each country. In this paper, we rely on all the multilevel rounds of the ESS (round 4, 2008 – round 9, 2018), which integrate information on individual respondents and contextual variables at different macro

levels (country, macro-regional, regional). We provide descriptive statistics in Table 1, and the full list of variable names and associated ESS Survey questions in Appendix Section 1, Table A1.

3.2 Dependent Variable

To measure social participation, we rely on the frequency of meetings with relatives, friends, and colleagues, which is widely used in the literature (Sonnenberg 2014; Dieckhoff and Gash 2015; Eckhard 2020; Rözer *et al.* 2020). The question is "*how often do you meet socially with friends, relatives or work colleagues?*", where socially "*implies meet by choice rather than for reasons of either work or pure duty*" (ESS Round 9 Questionnaire, p. 16). The variable takes seven values, from the least participation to the highest participation (Table 1). "*Refusal*" and "*Don't Know*" answers are recoded as missings (0.67% of sample). Therefore, we rely on a measure of *informal* social participation, rather than formal, related to the first two spheres of sociability (family and informal connections) rather than the third (participation in formal associations or institutions) (Gallie, Paugam, and Jacobs 2003). Our rationale for this strategy is two-fold: as our key mechanisms rely on social stigma, rather than economic costs, we focus on those social activities that do not engender monetary costs for membership, which may pose a barrier to participation at the extensive margin (Gallie *et al.* 1994). Therefore, we focus on whether unemployment experiences affect the intensive margin, or the *frequency* of social participation in informal settings, where there are as low institutional/membership dynamics as possible, and where the separate mechanisms of political engagement (such as anger against the government, Emmenegger *et al.* 2015) do not play a direct role.

3.3 Independent Variables

Unemployment Scarring

Regarding unemployment scars, we rely on variables measuring whether the respondent has ever been unemployed for over three months or over twelve months. To measure the severity of the unemployment scar, we also consider when it happened through a further variable, which measures whether the scar has taken place within the last 5 years prior to the survey, or more than 5 years before.

Therefore, we build a single variable that takes on three values: 0 if the respondent has never experienced unemployment for over 3 months ("Never Scarred"), 1 if the respondent has experienced unemployment for over 3 months but less than one year, or if the respondent has experienced unemployment for more than one year but more than 5 years before the survey ("Mild Scar"), and 2 if the respondent has experienced unemployment for more than one year within the last 5 years before the survey ("Severe Scar").

Socio-Demographic Controls

Our socio-demographic controls include ten variables: origin social class, destination social class, the highest level of education, household income decile, labour market position, age, religiosity, migrant and ethnic status, and gender. These variables address the key correlates of social participation (Brand and Burgard 2008; Dieckhoff and Gash 2015; Pohlan 2019).

For origin social class, we rely on the social class of the parent with the highest class, measured according to the Erikson-Goldthorpe-Portocarero (1979) schema. For destination social class, we transform the ISCO-08 measures (into social classes according to the European Socio-Economic Classification (ESEC) by Rose and Harrison (2007), which is an updated version of the Erikson-Goldthorpe-Portocarero (1979) schema[1]. The labour market position controls for the impact of being currently unemployed. While this is clearly correlated to unemployment scarring, only 52% of those with a Severe Unemployment Scar are currently unemployed, while 44% are in paid work and 4% are in education.

[1] To do so, we rely on the *iscogen* Stata package by Jann (2019).

We exclude individuals outside the workforce, thus including respondents either in paid work, in education, or being unemployed. For education, we rely on the ES-ISCED classification present in the dataset. For household income we rely on deciles, adding a decile for missing responses (16.15% of the sample). The variables measure respondents' age, religiosity, native/migrant background, and gender are binary, except for age, which is continuous and bounded between ages 18 and 65 to ensure presence in the workforce (Heggebø and Elstad 2018).

Unemployment Rates and Contexts

If we only include the micro-variables, the sample size includes around 120 thousand observations for frequency of social meetings with relatives/friends/colleagues, for 33 countries and 145 country-years: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain and Northern Ireland, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Turkey. We will rely on this sample to test Hypothesis 1 at the micro-level (Table 2). For the subnational data, we rely on the macro-regional (NUTS1) and regional (NUTS2) units in the Nomenclature of Territorial Units for Statistics, used by Eurostat to harmonise hierarchical levels across the European Union and selected non-EU countries. We do so as certain countries lack one of the two levels (*e.g.*, Germany and Great Britain for NUTS2 regions). We exclude units with a single NUTS unit for each country from the respective regressions, as they do not feature subnational variation. For the macro-regional NUTS1 specifications, the sample is around 60 thousand respondents from 16 countries, 105 NUTS1 units, and 434 NUTS1-years. For the NUTS2 specifications, the sample is around 84 thousand respondents from 23 countries, 230 NUTS2 units, and 894 NUTS2-years. Our second focal covariate is the unemployment rate at the NUTS1 and NUTS2 levels, measured by Eurostat and included in the multilevel ESS dataset. The descriptive statistics for the unemployment rates at the three levels are presented in Table 1. The full list of Country, NUTS1, and NUTS2 units, with the associated yearly unemployment rates, is available in Appendix Section 2.

3.4 Analytical Strategy

To study how our explanatory variables affect social participation, we fit linear regressions to the ESS data. We rely on robust Standard Errors using country-years as clusters to mitigate heteroskedasticity, and design weights to account for group differences in the probability of being interviewed.

Our research questions face a key challenge: we are interested in how contextual unemployment rates influence the individual effect of unemployment experiences on social participation. However, we need to disentangle the role of the contextual unemployment rates from that of other socio-economic dynamics that may be related to unemployment, such as GDP, income inequality, and many others for which we may lack precise data. To address this unobserved heterogeneity, our analytical strategy is to include Fixed Effects, which separate the mean values by each context from the individual values, thus demeaning the individual results. Given our interest in a dynamic that varies across both space and time, we rely on context-year Fixed Effects. For instance, one dynamic potentially confounding our results would be differential selection into unemployment: the socio-demographic characteristics of unemployment may be considerably different where the unemployment rate is 3% relatively to where it is 20%. Therefore, our results may be confounded by these compositional differences driven by the different unemployment rates. The context-year Fixed Effects will account for these potential confounders in Hypothesis 1.

However, this poses a further challenge for Hypotheses 2 and 3, as the yearly unemployment rates would be completely captured by the context-year Fixed Effects. We address this challenge by conduct four separate regressions, one for each quartile of the unemployment rate distribution at the three geographical levels, while keeping an otherwise identical analytical strategy to that used in Hypothesis 1. The advantage of this approach is that we can exploit the variation in unemployment rate across space and time, but that we can still control for macro-social dynamics at the national, macro-regional, and regional levels. Therefore, this strategy reflects

the theoretical tension between national and regional units, typically considered as powerful in shaping social outcomes (Clark 2003; Pittau, Zelli, and Gelman 2010; Eichhorn 2014).

4. Results

4.1 Micro

Table 2 presents the results of regressing the social participation dependent variable on unemployment scarring and the aforementioned socio-demographic controls. For graphical purposes, we present only the key results. The full results are available in Appendix Section 3, Table A5. The three regressions differ in terms of the geographical units for which we use the Fixed Effects: these are respectively Country-Year, Macro-Region-Year (NUTS1), and Region-Year (NUTS2) in Models 1, 2, and 3. Across these models, the common pattern is that unemployment experiences consistently decrease social participation, in a statistically significant manner. The impact is relatively stronger for unemployment experiences that are longer and more recent (Severe Scar) relatively to older and shorter experiences (Mild Scar). However, the global magnitude of these impacts is not very large, with the effect sizes consistently between -4% and -6% of a Standard Deviation in the dependent variable.

The direction of the effect contrasts with the results of *current* labour market position: relatively to being in paid work, those in education or currently unemployed show more frequent social participation. The contrast between unemployment scars and current unemployment reflects an ambiguity in the literature and will be discussed in the conclusive section. The other socio-demographic controls show effects largely in line with previous research: social participation is higher among the upper strata of society, among younger individuals, among the more religious, men, and natives. Broadly, these results support Hypothesis 1: unemployment experiences decrease social participation, albeit the magnitude of the effects is relatively limited.

Table 2 – Social Participation, Regressed on Unemployment Scarring and Controls

Dependent Variable	Frequency of Social Meetings		
Model No.	1	2	3
Geographical Context	Country	NUTS1	NUTS2
Unemployment Scar (Baseline: Never Scarred)			
Mild Unemp. Scar (>3 Months, >1 year not in last 5 years)	-0.072***	-0.091***	-0.078***
	(0.013)	(0.016)	(0.014)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.089***	-0.091**	-0.091***
	(0.023)	(0.030)	(0.025)
Current Labour Market Position (Baseline - Paid Work)			
In Education	0.397***	0.370***	0.360***
	(0.027)	(0.031)	(0.024)
Unemployed	0.072***	0.075**	0.075**
	(0.021)	(0.027)	(0.023)
Household Income Decile (Baseline: Top Decile)			
Ninth Decile	-0.074***	-0.075**	-0.048*
	(0.018)	(0.027)	(0.023)
Eight Decile	-0.096***	-0.099***	-0.061**
	(0.019)	(0.024)	(0.022)
Seventh Decile	-0.104***	-0.110***	-0.080***
	(0.018)	(0.026)	(0.022)
Sixth Decile	-0.135***	-0.125***	-0.083***
	(0.022)	(0.028)	(0.023)
Fifth Decile	-0.097***	-0.080*	-0.069**
	(0.023)	(0.031)	(0.025)
Fourth Decile	-0.132***	-0.120***	-0.101***
	(0.022)	(0.030)	(0.025)
Third Decile	-0.094***	-0.106**	-0.036
	(0.023)	(0.032)	(0.027)
Second Decile	-0.131***	-0.095**	-0.056
	(0.027)	(0.035)	(0.031)
Bottom Decile	-0.094**	-0.092*	-0.043
	(0.031)	(0.042)	(0.032)
Missing Income	-0.041	-0.055	-0.009
	(0.025)	(0.030)	(0.026)
Age	-0.023***	-0.024***	-0.022***
	(0.001)	(0.001)	(0.001)
Religious	0.038**	0.044**	0.026*
	(0.012)	(0.015)	(0.012)
Gender (Baseline: Woman)	0.048***	0.040**	0.052***
	(0.012)	(0.014)	(0.012)
Born in Country	0.168***	0.201***	0.175***
	(0.023)	(0.029)	(0.026)
Ethnic Minority	-0.058	-0.042	-0.015
	(0.031)	(0.038)	(0.036)
Constant	5.873***	6.527***	5.878***
	(0.062)	(0.073)	(0.058)
Other Socio-Demographic Controls (Social Class, Education)	Yes	Yes	Yes
Fixed Effects	Country-Year	NUTS1-Year	NUTS2-Year
Robust Standard Errors Clustered around	Country-Year	NUTS1-Year	NUTS2-Year
N	120027	60864	84498
Adj. R^2	18.5%	19.4%	19.9%

Notes: *Coefficients from Linear Regressions, with Context-Year Fixed Effects (Country-Year, NUTS1-Year, NUTS2-Year), Cluster-Robust Standard Errors (Context-Year), and Design Weights*. **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018). * p < 0.05, ** p < 0.01, *** p< 0.001*

4.2 Macro-Micro

Table 3 – Social Participation, Regressed on Unemp. Scarring by Contextual Unemployment Quartile

Model No.	4	5	6	7
Context: Country	Bottom Quartile	Second Quartile	Third Quartile	Top Quartile
Unemployment Scar (Baseline: Never Scarred)				
Mild Unemp. Scar (>3 Months, >1 Year not in last 5 years)	-0.094**	-0.100***	-0.089**	-0.014
	(0.028)	(0.023)	(0.025)	(0.023)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.204***	-0.107*	-0.135***	0.002
	(0.048)	(0.044)	(0.033)	(0.041)
Constant	5.791***	5.879***	6.244***	6.159***
	(0.106)	(0.138)	(0.121)	(0.144)
Socio-Demographic Controls	Yes	Yes	Yes	Yes
Fixed Effects	Country-Year	Country-Year	Country-Year	Country-Year
Robust Standard Errors Clustered around	Country-Year	Country-Year	Country-Year	Country-Year
N	29541	28404	32316	29766
Adj. R^2	19.4%	15.2%	18%	21%
Model No.	8	9	10	11
Context: NUTS1 - Macro-Region	Bottom Quartile	Second Quartile	Third Quartile	Top Quartile
Unemployment Scar (Baseline: Never Scarred)				
Mild Unemp. Scar (>3 Months, >1 Year not in last 5 years)	-0.103***	-0.118***	-0.101***	-0.012
	(0.028)	(0.026)	(0.028)	(0.028)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.214***	-0.157**	-0.102**	-0.017
	(0.058)	(0.054)	(0.035)	(0.043)
Constant	4.725***	5.226***	5.463***	5.373***
	(0.152)	(0.130)	(0.136)	(0.139)
Socio-Demographic Controls	Yes	Yes	Yes	Yes
Fixed Effects	NUTS1-Year	NUTS1-Year	NUTS1-Year	NUTS1-Year
Robust Standard Errors Clustered around	NUTS1-Year	NUTS1-Year	NUTS1-Year	NUTS1-Year
N	16259	21673	28839	23499
Adj. R^2	19.4%	17.3%	16.2%	19.7%
Model No.	12	13	14	15
Context: NUTS2 - Region	Bottom Quartile	Second Quartile	Third Quartile	Top Quartile
Unemployment Scar (Baseline: Never Scarred)				
Mild Unemp. Scar (>3 Months, >1 Year not in last 5 years)	-0.090**	-0.116***	-0.101***	-0.006
	(0.027)	(0.031)	(0.024)	(0.026)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.270***	-0.079	-0.104*	-0.031
	(0.068)	(0.047)	(0.045)	(0.042)
Constant	5.937***	6.050***	5.942***	6.318***
	(0.155)	(0.136)	(0.107)	(0.123)
Socio-Demographic Controls	Yes	Yes	Yes	Yes
Fixed Effects	NUTS2-Year	NUTS2-Year	NUTS2-Year	NUTS2-Year
Robust Standard Errors Clustered around	NUTS2-Year	NUTS2-Year	NUTS2-Year	NUTS2-Year
N	20670	20868	21412	21548
Adj. R^2	20%	20.1%	19.4%	20.3%

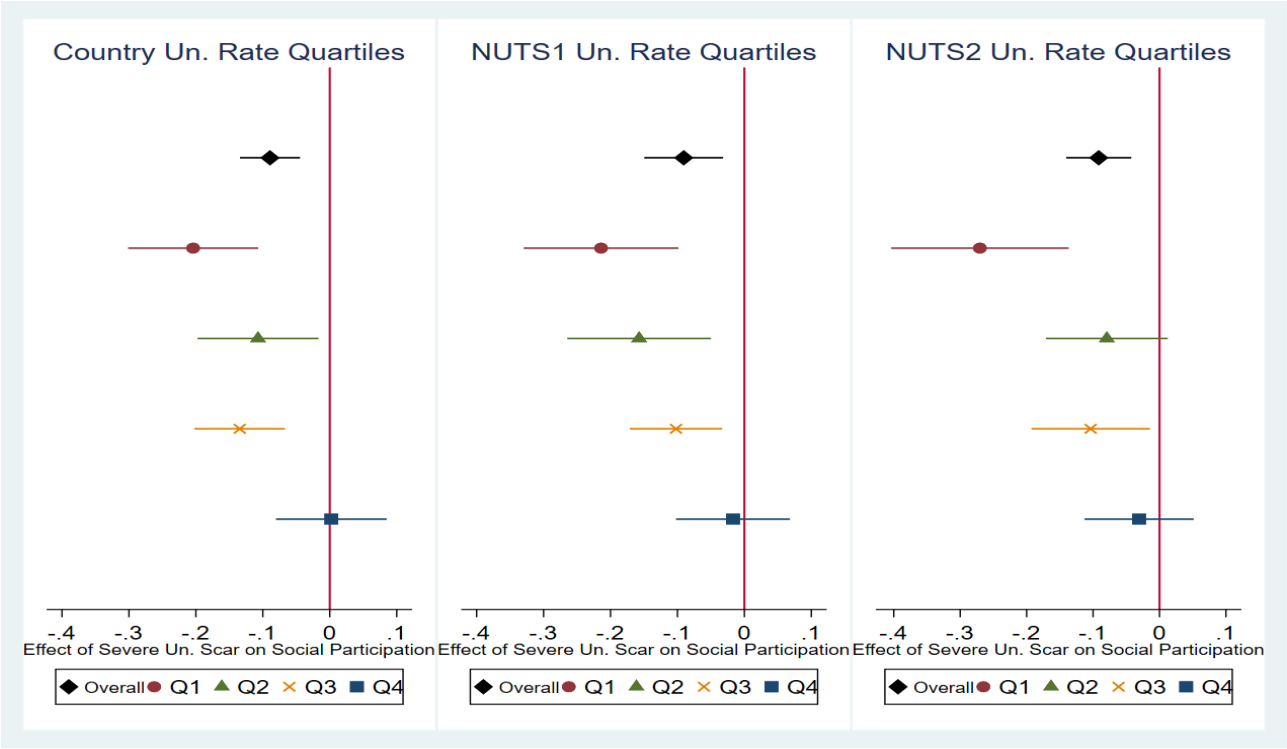
Notes: *Coefficients from Linear Regressions, conducted separately for each quartile of the yearly unemployment rate, respectively for Countries, NUTS1, and NUTS2 contexts. Socio-Demographic controls included, together with Context-Year Fixed Effects (Country-Year, NUTS1-Year, NUTS2-Year), Cluster-Robust Standard Errors (Context-Year), and Design Weights.* **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018). * p < 0.05, ** p < 0.01, *** p< 0.001*

How do these individual effects vary across contexts with high or low unemployment rates? We report in Table 3 the results of three groups of four regressions, respectively regressing social participation in the first (Bottom), second, third, and fourth (Top) quartiles of the yearly unemployment rate for countries, macro-regions, and regions. As in Table 2, we include for each geographical level the associated Fixed Effects. For purposes of graphical clarity, we report here only the key coefficients. The complete results are in Appendix Section 3, Tables A6-A8.

Considering the Country context, the regressions by quartile present a clear pattern: the impact of unemployment experiences is stronger and significant where the contextual unemployment is lowest. On the other hand, the individual effect decreases in magnitude where unemployment is in the two central quartiles of the distribution and becomes positive but not statistically significant at the highest levels of the unemployment rate (top 25% of the distribution). Again, this is more marked for longer and more recent unemployment experiences. The Macro-Regional and Regional geographic levels present substantially similar dynamics: the scar effects of unemployment on social participation are stronger wherever the contextual unemployment is smaller, and null and not significant where it is higher.

To better interpret these coefficients, we report them with the associated 95% Confidence Intervals in Figure 1. For purposes of comparability, we also report the coefficients from the "Overall" specifications (Table 2). For purposes of graphical clarity, we depict only coefficients for Severe Unemployment Scars. The Mild coefficients are available in Appendix Section 3, Figure A1.

Figure 1 – Impact on Social Participation, Coefficients for Severe Unemp. Scar by Contextual Unemp. Quartile



Notes: *Severe Unemployment Scar Coefficients from Linear Regressions with 95% Confidence Intervals, baseline: Never Scarred. Obtained from Models in Table 2 (Overall), and Table 3 (Quartiles). Latter are conducted separately for each quartile of the contextual yearly unemployment rate (Q1 – Bottom, Q2 – Second, Q3 – Third, Q4 – Top), respectively for Countries, NUTS1, and NUTS2 contexts. Socio-Demographic controls included, together with Context-Year Fixed Effects (Country-Year, NUTS1-Year, NUTS2-Year), Cluster-Robust Standard Errors (Context-Year), and Design Weights.* **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018).*

Figure 1 corroborates the findings from Table 3: by comparing also the 95% Confidence Intervals, it emerges that the effects differ substantially between the extreme quartiles of the unemployment distribution.[2] In terms of magnitude, the variation between the individual effects is largest at the Regional level and smallest at the Country level, which again reinforces the narrative in the literature that closer socio-demographic dynamics play a crucial role in shaping behavioural outcomes. Considering these results, Hypotheses *2*, *3a*, and *3b* are supported: the effects of individual unemployment experiences vary considerably across different contexts. This depends on the contextual unemployment rates, with the negative effects exacerbating where these rates are higher, and mitigating where the rates are lower. We discuss these implications in the conclusive section.

5. Discussion and Conclusion

In this paper, we addressed two questions: do past experiences of unemployment undermine social participation? If so, does the contextual unemployment rate moderate the micro-level effect? Our answers are the following: in line with Hypothesis 1, past unemployment experiences decrease electoral participation, with stronger effects for longer and more recent unemployment spells. However, the magnitude of these individual effects is relatively limited. The macro-micro results shed further light on this dynamic: there is considerable variation in effect size and statistical significance between the contexts where the unemployment is least and highest. More specifically, the scar effects of unemployment on social participation are considerable where unemployment is lower, and next to null and non-significant where it is higher. This pattern holds across the national, macro-regional, and regional levels, and is most marked at the regional level, supporting the mechanisms of *habituation*/*status deprivation* (Clark 2003; Heggebø and Elstad 2018; Giustozzi and Gangl 2021) and *counterstigmatization* (Baglioni 2012), and in turn supporting Hypotheses 2, 3a, and 3b.

These findings contribute to the literature in three ways. First, they corroborate the individual-level evidence on the focal relationship (Brand and Burgard 2008; Pohlan 2019), by extending the geographical scope to 33 countries, over up to 10 years, whereas the near entirety of previous studies has focused on a single country, except for Julkunen (2002) and Dieckhoff and Gash (2015), with the latter relying on a single EU-SILC wave (2006). Therefore, this contribution examines the association between past unemployment experiences and social participation with the widest geographical and temporal scope to date. Secondly, they reconcile the main findings in the literature on social participation with the results by Sonnenberg (2014) and Kunze and Suppa (2017) for Germany, who found that the unemployed had higher contacts with friends and family. This could be driven by their independent variables, which do not fully distinguish the currently unemployed from past unemployment experiences. Our findings account for both these perspectives by showing that past unemployment experiences depress informal social participation, but current unemployment increases frequency of contacts with relatives/friends/colleagues. Therefore, these results highlight the relevance of disentangling the impact of past and current unemployment experiences on social participation.

Third, they clarify the role of the contextual unemployment rate. The literature presented a lack of consensus on the role of the unemployment rate (Dieckhoff and Gash 2015; Kunze and Suppa 2017), which could be explained by the respective use of national vs. regional unemployment rates, given the literature highlighting the centrality of the *regional* unemployment rate for individual attitudes and behaviour (Pittau, Zelli, and Gelman 2010; Eichhorn 2014). In our analysis, we tested the moderating role of the unemployment rate at the country, macro-regional, and regional levels to account for both national and subnational perspectives, while controlling for the contextual unobserved heterogeneity with a heterogeneous context-year Fixed Effects strategy. Our macro-micro findings are similar across all contextual levels, in line with the findings of Kunze and Suppa (2017) and against those of Dieckhoff and Gash (2015), who however theorized a positive effect and found partial support for it. Still, the theoretical expectation of the effects being stronger at the regional

[2] For the Macro-Regional context, where there is a slight overlap in terms of the Confidence Intervals, a t-test reports the -0.197 difference as statistically significant, with Pr.(T<t=0.000).

level is supported by the findings, with the effect sizes being progressively stronger when moving from the country-level to the NUTS2 region-level. While it is reassuring that the contextual and individual unemployment do not jointly exacerbate social participation, these findings show that the vicious circle between individual unemployment and social isolation described by Gallie, Paugam, and Jacobs (2003) is a concrete risk across most contexts in Europe, with the negative participatory effects not holding only where the unemployment rate is highest. This pattern aligns with streams of research across social psychology, economic and political sociology articulating the importance of the geographic and socio-economic context for socio-political attitudes and behaviour (Clark 2003; Gallie, Paugam, and Jacobs 2003; Marx and Nguyen 2016; Giustozzi and Gangl 2021; Azzollini 2021).

The key limitation of this paper is the cross-sectional nature of the data: although we leverage retrospective questions, we do not know exactly when the unemployment spell took place, nor do we have information on the same individuals over time as in panel data. Due to this limitation, we cannot approach causality with a respondent Fixed Effects design, which would remove the respondent time-invariant unobserved heterogeneity. However, the main goal of this paper was not to demonstrate causally the scar effects of unemployment on social participation at the micro-level, especially considering this has been thoroughly established by Brand and Burgard (2008), Sonnenberg (2014), Kunze and Suppa (2017), Pohlan (2019), and Eckhard (2020) with longitudinal datasets as the British Household Panel Study and the German Socio-Economic Panel. Instead, our main goal was to explore under what contextual conditions do the scar effects of unemployment affect informal social participation, which we have done for 33 countries, 105 NUTS1 macro-regions, and 230 NUTS2 regions across Europe and neighbouring countries, while employing context-year (Country-Year, NUTS1-Year, NUTS2-Year) Fixed Effects to control for the entire context-level unobserved heterogeneity (both time-invariant and time-variant), including differential selection into unemployment and other contextual confounders.

Future research may extend this macro-micro unemployment framework to examine further socio-political patterns, such as civic participation, political attitudes and party choice. Considering the macro-micro impact of unemployment on social participation, an important next direction would be to extend the analysis to the third "*sphere of sociability*" (Gallie *et al.* 2003), globally referring to civic participation. More specifically, future research may further develop this macro-micro framework of unemployment and participation to analyse the impact on the multiple forms of civic participation (*e.g.*, association membership, Gallie *et al.* 2003; protest, Chabanet and Faniel 2012; social movement participation, Della Porta and Diani 2015), exploring how unemployment relates to the several underpinning mobilization mechanisms.

In conclusion, unemployment scars social participation at the individual level, but this is moderated by the contextual unemployment rate, at the country, NUTS1 (macro-regional), and NUTS2 (regional) levels. The effect is particularly harmful where the unemployment rate is low and not statistically significant where it is high. This is problematic, as it could lead to a vicious circle between labour market marginality and social isolation (Gallie, Paugam, and Jacobs 2003), hampering civil society *fora* (Habermas 1991; Eder 2014), and potentially undermining societal cohesion (Melucci 1996) which is fundamental for democracy. Therefore, extending the framework of the scar effects of unemployment to social participation can further illuminate the relationship between social stratification and socio-political behaviour, which is crucial to understand the shifting democratic landscapes in contemporary Europe and beyond.

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Dataset

European Social Survey Rounds 4-9 (2008, 2010, 2012, 2014, 2016, 2018). Multilevel Dataset. NSD Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC.
European Social Survey Questionnaire (Round 9): https://www.europeansocialsurvey.org/docs/round9/fieldwork/united_kingdom/ESS9_questionnaires_GB.pdf

Author's Information

Leo Azzollini is a Postdoctoral Research Officer at the University of Oxford within the ERC Synergy Project DINA ("*Towards a System of Distributional National Accounts*", Grant n. 856455), jointly between the Institute for New Economic Thinking (Department of Social Policy and Intervention) and the Leverhulme Centre for Demographic Science (Department of Sociology). He is also a Non-Stipendiary Research Fellow in Sociology at Nuffield College.

APPENDIX OF RESEARCH ARTICLE

Unemployment and Social Participation: the joint role of Individual and Contextual Unemployment in Europe

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Appendix Section 1 – Variable List and Questions

Table A1 – Variable List and European Social Survey Questions

Variable	ESS Variable Name	European Social Survey Question
Social Participation	*sclmeet*	how often do you meet socially with friends, relatives or work colleagues?
Short Unemp. Scar	*uemp3m*	Have you ever been unemployed and seeking work for a period of more than three months?
Long Unemp. Scar	*uemp5yr*	Have any of these periods lasted for 12 months or more?
Origin Social Class	*occf14b*	Which of the descriptions best describes the sort of work he (your father) did when you were 14?
	occm14b	Which of the descriptions best describes the sort of work she (your mother) did when you were 14?
Destination Social Class	*isco08/iscoco*	What does/did the firm/organisation you work/worked for mainly make or do?
Education Level	*eisced*	What is the highest level of education you have successfully completed?
Household Income Decile	*hinctnt/a*	Please tell me which [decile] describes your household's total income, after tax and compulsory deductions, from all sources?
Current Activity	*mnactic*	Using this card, which of these descriptions applies to what you have been doing for the last 7 days?
	pdjobev	Have you ever had a paid job?
Age	*agea*	[Coded by respondent directly]
Religious	*rlgblg*	Do you consider yourself as belonging to any particular religion or denomination?
Sex	*gndr*	[Coded by respondent directly]
Native	*brncntr*	Were you born in [country]?
Minority	*blgetmg*	Do you belong to a minority ethnic group in [country]?

Source: ESS Questionnaires [English]

Appendix Section 2 – Unemployment Rates, by Contextual Level and Year

Table A2 - Unemployment Rates (in %), by Country

Country	2008	2010	2012	2014	2016	2018
Belgium	7	8.3	7.5	8.5	7.8	5.9
Austria				5.6	6	4.8
Bulgaria	5.6	10.2	12.3			5.2
Switzerland	3.3	4.5	4.2	4.5	4.9	4.7
Cyprus	3.7	6.2	8.4			11.8
Czech Republic	4.4	7.3	7	6.1	4	2.2
Germany	7.5	7.1	5.5	5	4.1	3.4
Denmark	3.3	7.4	7.5	6.6		5.1
Estonia	5.5	16.9	10.2	7.4	6.8	5.4
Spain	11.3	20.1	25	24.4	19.6	15.3
Finland	6.4	8.4	7.7	8.7	8.8	7.4
France	7.8	9.7	10.3	10.3	10.1	9.1
Great Britain	5.6	7.8	7.9	6.1	4.8	4
Greece	7.7	12.5				
Croatia	8.4	11.8				8.4
Hungary	7.8	11.2	10.9	7.7	5.1	3.7
Ireland	6	13.5	14.7	11.3	8.4	5.7
Israel				6		
Italy			10.7		11.7	10.6
Lithuania		17.8	13.2	10.7	7.9	6.1
Latvia	7.4					7.5
Montenegro						15.2
Netherlands	2.8	4.5	5.3	7.4	6	3.8
Norway	2.5	3.5	3.1	3.5	4.7	3.8
Poland	7.1	9.6	10.1	9	6.2	3.8
Portugal	7.6	10.8	15.7	13.9	11.1	7
Romania	5.8					
Serbia						12.7
Sweden	6.2	8.4	8	8	7	6.4
Slovenia	4.4	7.2	8.8	9.7	8	5.1
Slovakia	9.5	14.4	14			6.5
Turkey	9.7					

Notes: *Unemployment Rates by Country and Year, with design weights.*
Data Source: *EUROSTAT, included in European Social Survey, Multilevel Rounds 4-9 (2008-2018).*

Table A3 - Unemployment Rates (in %), by NUTS1

	Unemployment Rate (in %)					
NUTS1	**2008**	**2010**	**2012**	**2014**	**2016**	**2018**
AT - Austria						
AT1 - Eastern Austria				7.5	8.2	6.8
AT2 - Southern Austria				5.2	5.2	4
AT3 - Western Austria				3.7	3.9	3
BE - Belgium						
BE1 - Brussels	15.9	17.3	17.4	18.3	16.7	13.2
BE2 - Flanders	3.9	5.1	4.5	4.0	4.8	3.4
BE3 - Wallonia	10	11.4	10	11.8	10.5	8.4
BG - Bulgaria						
BG3 - North-Eastern Bulgaria	7.5	12	14.3			7.4
BG4 - South-Western and Central	3.8	8.6	10.4			3.2
DE - Germany						
DE1 - Baden-Württemberg	4.2	4.8	3.4	3.1	3.1	2.5
DE2 - Bavaria	4.2	4.4	3.2	2.9	2.5	2.2
DE3 - Berlin	15.1	13.2	10.6	9.8	7.8	6.1
DE4 - Brandenburg	11.5	10	8.3	6.7	4.6	4.1
DE5 - Bremen	9.5	8.1	6.7	6.6	5.3	4.3
DE6 - Hamburg	7.1	7.1	5.4	5	4.1	4.1
DE7 - Hesse	6.4	5.9	4.7	4.4	3.9	3.1
DE8 - Mecklemburg-Vorpommern	14.6	12.4	10.8	9.6	6.3	4.8
DE9 - Lower Saxony	7.1	6.5	5	4.6	4	3.3
DEA - North Rhine-Westphalia	7.4	7.5	5.9	5.6	4.5	3.8
DEB - Rhineland-Palatinate	5.6	5.5	4	3.9	3.6	3.1
DEC - Saarland	7.1	7	6.4	5.8	4.8	3.6
DED - Saxony	12.9	11.3	8.2	7.2	5	4
DEE - Saxony-Anhalt	14.6	11.4	9.5	8.8	7.4	5.3
DEF - Schleswig-Holstein	6.8	6.8	5.1	4.6	4	3.1
DEG - Thuringia	10.6	8.6	7.2	6	5.1	4.1
ES - Spain						
ES1 - North-West	8.5	15.3	20.5	21.2	16.9	13
ES2 - North-East	6.8	12.3	16.6	17.5	13.3	10.2
ES3 - Madrid	8.7	16.1	19	18.7	15.7	12.2
ES4 - Central	11.3	19.1	25.5	25.6	20.9	16.6
ES5 - East	10.2	20	24.5	22.2	17.3	12.9
ES6 - South	17	27.2	33.5	33.5	27.5	22.1

ES7 - Canarias	17.4	28.7	33	32.4	26.1	20.1
FR - France						
FR1 - Paris Region		8.9	8.5	9.7	9.2	8.7
FR2 - Parisian Basin		9.4	10.5	10.7		
FR3 - North		13.1	13.6	13.8		
FR4 - East		9	10.4	10.8		
FR5 - West		8.1	8.6	8.7		
FR6 - South-West		8.3	9.1	9.2		
FR7 - Central-East		8.3	8.5	8.8		
FR8 - Mediterranean		11.5	11.9	10.8		
FRB - Central Loire Valley					8.3	9.9
FRC - Burgundy Franche-Comte					8.9	8.2
FRD - Normandy					10.2	8.7
FRE North Pas de Calais Picardie					12.7	11.2
FRF - Alsace-Champagne					8.9	11.4
FRG - Pays de la Loire					8.8	7.8
FRH - Brittany					8.6	6.8
FRI - Aquitane-Limousin					9.4	8.8
FRJ - Languedoc-Roussillon					10.1	9.5
FRK - Auvergne-Rhône-Alpes					7.9	7.4
FRL - Provence-Alpes-Côte d'Azur					10.6	9.3
GB - Great Britain and N. Ireland						
UKC - North East				9	7	
UKD - North West				6.7	5	
UKE- Yorkshire and the Humber				7.2	5.6	
UKF - East Midlands				5.5	4.5	
UKG - West Midlands				7.2	5.6	
UKH - East of England				5.1	3.9	
UKI - London				6.8	5.6	
UKJ - South East				4.6	3.5	
UKK - South West				4.7	3.8	
UKL - Wales				6.6	4.4	
UKM - Scotland				5.9	5.1	
UKN - Northern Ireland				6.4	5.7	
GR - Greece						
EL1 - Attiki	8.7	13.5				
EL2 - Aegean and Crete	8.7	11.9				
EL3 - Voreia Ellada	6.5	12.3				

EL4 - Kentriki Ellada	6.5	11.9				
HU - Hungary						
HU1 - Central Hungary	4.6	8.9	9.2	6.2	3.8	2.7
HU2 - Transdanubia	6.8	10.4	9.6	5.9	3.8	3.1
HU3 - Great Plain and North	11.3	13.6	13.5	10.5	7.2	5
IT - Italy						
ITC - Northwest			8		8.1	7
ITF - South			16.9		19.1	17.8
ITG - Insular Italy			17.7		19.7	20.7
ITH - Northeast			6.7		6.8	6
ITI - Central Italy			9.5		10.4	9.4
NL - Netherlands						
NL1 - North	3.4	4.9	5.9	8	7.1	4.8
NL2 - East	2.7	4.3	5.1	7.5	6.1	3.6
NL3 - West	2.7	4.4	5.4	7.4	6	3.9
NL4 - South	2.7	4.5	4.8	7.1	5.4	3.4
PL - Poland						
PL1 - Region Celtralny	6.2	7.7	8.1	7.7		
PL2 - Region Poludniowy	6.4	9.1	9.8	8.8	5.3	3.2
PL3 - Region Wschodni	8.2	10.9	11.2	11.7		
PL4 - Pólnocno - Zachodni	7	10	9.2	8	5.3	2.7
PL5 - Poludniowo - Zachodni	8.5	10.9	10.7	8.8	5.3	3.2
PL6 - Pólnocny	7.3	9.9	10.7	9.6	7	4
RO - Romania						
RO1 - Macroregion 1	6.1					
RO2 - Macroregion 2	5.6					
RO3 - Macroregion 3	5.4					
RO4 - Macroregion 4	6.1					
RS - Serbia						
RS1 - Serbia-North						10.7
RS2 - Serbia-South						14.8
SE - Sweden						
SE1 - East Sweden	5.9	8.1	7.6	7.6	7	6.3
SE2 - South Sweden	6.3	8.4	8.2	8.3	7.1	6.6
SE3 - North Sweden	6.7	9.1	8.3	8	6.9	5.9

Notes: *Unemployment Rates by NUTS1 and Year, with design weights.*
Data Source: *EUROSTAT, included in European Social Survey, Multilevel Rounds 4-9 (2008-2018).*

Table A4 - Unemployment Rates (in %), by NUTS2

	Unemployment Rate (in %)					
NUTS2	**2008**	**2010**	**2012**	**2014**	**2016**	**2018**
AT - Austria						
AT11 - Burgenland				4.8	5.7	4.2
AT12 - Lower Austria				5.1	5.2	3.8
AT13 - Wien				10.2	11.3	10
AT21 - Carinthia				6	5.4	4.1
AT22 - Styria				4.9	5.1	4
AT31 - Upper Austria				4	4.4	3.2
AT32 - Salzburg				3.5	3.4	2.8
AT33 - Tyrol				3.2	3.5	2.4
AT34 - Vorarlberg				3.4	3.4	3.3
BE - Belgium						
BE10 - Brussels		17.3	17.4	18.3	16.7	13.2
BE21 - Antwerp		6	5.3	6.1	6.1	4.3
BE22 - Limburg		5.3	4.7	5.6	4.8	3.8
BE23 - East Flanders		5.2	4.1	4.3	4.2	2.7
BE24 - Flemish Brabant		4.8	4.4	5	4.8	3.6
BE25 - West Flanders		3.8	3.9	4.2	3.7	2.6
BE31 - Walloon Brabant		8.3	7	8.8	7.9	6.9
BE32 - Hainaut		13.9	12.1	14.4	11.8	9.9
BE33 - Liège		11.5	10.7	12.3	11.1	8.2
BE34 - Luxembourg (Belgium)		7.5	7.6	8.5	7.8	5.4
BE35 - Namur		9.6	7.3	8.9	9.7	8.5
BG - Bulgaria						
BG31 - Northwestern	7.1	11	12.3			11.2
BG32 - Northern Central	8.5	11.5	14.3			6.7
BG33 - Northeastern	8.6	14.5	18.2			7.4
BG34 - Southeastern	5.4	5.8	10.6			11.9
BG41 - Southwestern	2.9	6.8	8.2			2.6
BG42 - Southern Central	5.1	11.4	13.8			4.2
DK - Denmark						
DK01 - Hovedstaden	3.6	7.8	8.2	7.1	5.4	
DK02 - Sjælland	3.2	6.7	6.4	6.3	5.2	
DK03 - Southern Denmark	3.2	7.6	7.9	6.7	4.9	
DK04 - Midtjylland	3.1	7.2	6.8	6.1	4.7	
DK05 - Nordjylland	3.4	7.4	7.9	6.4	5.5	
ES - Spain						
ES11 - Galicia	8.7	15.4	20.7	21.7	17.2	13.3
ES12 - Asturias	8.4	16	21.8	21.1	17.6	13.6

ES13 - Cantabria	7.2	13.9	17.7	19.4	14.9	10.7
ES21 - Basque Community	6.4	10.5	14.9	16.3	12.6	10
ES22 - Navarre	6.7	11.8	16.2	15.7	12.5	10
ES23 - La Rioja	7.8	14.3	20.5	18.2	13.5	10.4
ES24 - Aragon	7.1	14.8	18.6	20.2	14.7	10.6
ES30 - Madrid	8.7	16.1	19	18.7	15.7	12.2
ES41 - Castille-Leon	9.5	15.8	19.7	20.8	15.8	12.1
ES42 - Castile-La Mancha	11.6	21	28.5	29	23.5	18.2
ES43 - Extremadura	15.2	23	33	29.8	27.5	23.6
ES51 - Catalonia	9	17.8	22.6	20.3	15.7	11.5
ES52 - Valencian Community	12.1	23.3	27.7	25.8	20.6	15.6
ES53 - Balearic Islands	10.2	20.4	23.2	20	13.9	11.5
ES61 - Andalusia	17.8	28	34.6	34.8	28.9	23
ES62 - Region of Murcia	12.6	23.4	27.9	26.6	19.8	16.8
ES63 - Ceuta			38.5	31.9	24.9	29
ES64 - Melilla	20.7	23.7		25.8		28.4
ES70 - Canary Islands	17.4	28.7	33	32.4	26.1	20.1
FI - Finland						
FI13 - Ita-Suomi	9	10.1				
FI18 - Etela Suomi	5.3	7.4				
FI19 - West Finland	6.5	9	8.2	8.7	9.4	7.4
FI1A - Pohjois-Suomi	8.5	10.1				
FI1B - Helsinki-Uusimaa			6.3	7.3	7.4	6.9
FI1C - South Finland			7.5	9.4	9.1	7.4
FI1D - North and East Finland			9.5	10	10.2	8.1
FR - France						
FR10 - Île de France		8.9	8.5	9.7	9.2	8.7
FR21 - Champagne-Ardenne		9.6	11.2	11.4		
FR22 - Picardie		12	11.1	11.6		
FR23 - Haute-Normandie		10.2	11.5	11.9		
FR24 - Centre		7.3	11.2	9.5		
FR25 - Basse-Normandie		8.2	8.6	9.3		
FR26 - Bourgogne		9.4	9.3	10.7		
FR30 - Nord-Pas-de-Calais		13.1	13.6	13.8		
FR41 - Lorraine		9.8	12.2	11.8		
FR42 - Alsace		8.3	8.9	10.1		
FR43 - Franche-Comté		8.7	9.4	9.8		
FR51 - Pays de la Loire		8.9	8.8	8.6		
FR52 - Bretagne		7.2	7.4	8.4		

FR53 - Poitou-Charentes		8.1	8.8	10.9	
FR61 - Aquitaine		8.5	9	10	
FR62 - Midi-Pyrenees		8.3	8.8	9.1	
FR71 - Rhône-Alpes		8.5	8.4	8.8	
FR72 - Auvergne		7.4	10.6	7.4	
FR81 - Languedoc-Roussillon		14.4	15.7	12.3	
FR82 - Provence-Alpes-C.d'Azur		10.2	10.1	10.1	
FRB0 - Centre-Val de Loire					9.9 8.3
FRC1 - Bourgogne					9.5 8.9
FRC2 - Franche-Comté					8.2 7.2
FRD1 - Lower Normandy					8.6 8
FRD2 - Upper Normandy					11.5 9.3
FRE1 - Nord-Pas-de-Calais					13.3 12.2
FRE2 - Picardy					11.6 9.2
FRF1 - Alsace					10.9 8
FRF2 - Champagne-Ardenne					11.3 8.8
FRF3 - Lorraine					11.8 9.8
FRG0 - Pays de la Loire					8.8 7.8
FRH0 - Brittany					8.6 6.8
FRI1- Aquitaine					10.1 9.3
FRI2 - Limousin					7.1 7
FRI3 - Poitou-Charentes					9 8.7
FRJ1 - Languedoc-Roussillon					12 11.7
FRJ2 - Midi-Pyrenees					8.6 7.7
FRK1 - Auvergne					7.2 7.7
FRK2 - Rhone-Alpes					8 7.3
FRL0 - Provence-Alpes-C. d'Azur					10.6 9.3
GR - Greece					
GR11 - Anatoliki Makedonia	8.7	14.2			
GR12 - Kentriki Makedonia	8.3	13.5			
GR13 - Dytiki Makedonia		15.5			
GR14 - Thessalia	8.4	12.1			
GR21 - Ipeiros		12.6			
GR22 - Ionia Nisia		14.8			
GR23 - Dytiki Ellada		11.7			
GR24 - Sterea Ellada	8.5	12.5			
GR25 - Peloponnisos	7.1	9.8			
GR30 - Attiki	6.5	12.3			

GR41 - Voreio Algaio		9				
GR42 - Notio Aigaio		14.2				
GR43 - Kriti	6.3	11.7				
HR - Croatia						
HR01 - Northwestern	4.9	7.9				
HR02 - Pannonian Croatia	12.9	18				
HR03 - Adriatic Croatia	8.7	11.3				9.4
HR04 - Continental Croaita						8
HU - Hungary						
HU10 - Budapest (Old)	4.6	8.9	9.2	6.2		
HU11 Budapest (New)						3.1
HU21 - Central Transdanubia	5.8	10.3	9.8	5.6	3	2.2
HU22 - Western Transdanubia	4.9	9.2	7.4	4.6	2.7	2
HU23 - Southern Transdanubia	10.3	12.1	12	7.8	6.2	5.6
HU31 - Northern Hungary	13.4	16	16.6	10.4	6.3	4.7
HU32 - Northern Great Plain	12	14.5	13.9	11.8	9.3	6.6
HU33 - Souther Great Plain	8.8	10.6	10.5	9	5.6	3.3
IE - Ireland						
IE01 - Border, Midland, and West	7	14	16.5	12.3		
IE02 - Southern and Eastern	5.7	13.3	14.1	10.9		
IE04 - Northern and Western						5.6
IE05 - Southern						6.1
IE06 - Eastern and Midland						5.6
IT - Italy						
ITC1 - Piedmont			9.2		9.3	
ITC2 - Aosta Valley					8.7	
ITC3 - Liguria			8.1		9.7	
ITC4 - Lombardy			7.5		7.4	
ITF1 - Abruzzo			10.8		12.1	
ITF3 - Campania			19.3		20.4	
ITF4 - Apulia			15.7		19.4	
ITF5 - Basilicata			14.5		13.3	
ITG1 - Sicily			18.6		22.1	
ITG2 - Sardinia			15.5		17.3	
ITH1 - Trentino			4.1		3.7	

ITH2 - Alto Adige/Sudtirol			6.1		6.8	
ITH3 - Veneto			6.6		6.8	
ITH4 - Friuli - Venezia Giulia			6.8		7.5	
ITH5 - Emilia-Romagna			6.9		7.1	
ITI1 - Tuscany			7.8		9.5	
ITI2 - Umbria			9.6		9.8	
ITI3 - Marche			9.1		10.6	
ITI4 - Latium			10.8		11.1	
NL - Netherlands						
NL11 - Groningen	4	5.3	6.2	8.6	8.2	5.5
NL12 - Friesland	2.9	4.8	5.7	7.9	6.7	4.7
NL13 - Drenthe	3.6	4.5	5.7	7.3	6.5	4.1
NL21 - Overijssel	2.6	4.4	5.1	7.3	6.2	3.7
NL22 - Gelderland	2.6	4.1	4.8	6.9	5.6	3.3
NL23 - Flevoland	3.4	5.2	6.6	11	7.9	4.5
NL31 - Utrecht	2.1	3.7	4.7	6.4	5	3.4
NL32 - North Holland	2.6	4.2	5	6.9	5.5	3.8
NL33 - South Holland	3	5	6.3	8.4	7.1	4.3
NL34 - Zeeland	2.8	2.7	3.1	5.4	3.9	2.7
NL41 - North Brabant	2.3	4.2	4.7	7	5.3	3.4
NL42 - Limburg	3.4	5.1	4.9	7.4	5.7	3.4
PL - Poland						
PL11 - Lodzkie	6.7	9.3	11.1	8.9	5.5	
PL12 - Mazoweickie	6	7.4	8	7.2		
PL21 - Malopolskie	6.2	9.1	10.4	9.1	5.2	2.9
PL22 - Slaskie	6.6	9.1	9.4	8.6	5.4	3.4
PL31 - Lubelskie	8.8	9.9	10.5	9.9	8	
PL32 - Podkarpackie	8.2	11.7	13.2	14	9.6	
PL33 - Swietokrzyskie	8.8	12	13.1	11.4	8.9	
PL34 - Podlaskie	6.4	10.2	9.2	9.1	6.7	
PL41 - Wielkopolskie	6.1	8.8	8.5	7.7	4.8	2.2
PL42 - Zachodniopomorskie	9.5	12.3	10.9	8.4	6.9	3.8
PL43 - Lubuskie	6.5	10.5	9	8.3	4.7	3
PL51 - Dolnoslaskie	9.1	11.3	11.1	9.1	5.5	3.3
PL52 - Opolskie	6.5	9.6	9.5	7.8	5	3.2
PL61 - Kujawsko-Pomorskie	9.1	10.6	11.9	10.7	7.4	4.3
PL62 - Warminsko-Mazurkie	7.4	9.6	11	9.8	8.8	5.6
PL63 - Pomorskie	5.5	9.3	9.5	8.6	5.7	3
PT - Portugal						
PT11 - North	8.7	12.6	16.1	14.8	12	7.3
PT15 - Algarve	7	13.4	17.9	14.5	9.2	6.4

PT16 - Centro	5.4	7.7	12	10.6	8.4	5.6
PT17 - Lisbon Metropolitan Area	8.2	11.3	17.6	14.9	11.9	7.4
PT18 - Alentejo	9	11.4	15.9	14.3	12.1	7.2
RO - Romania						
RO11 - North-West	3.8					
RO12 - Central	8.5					
RO21 - North-East	4.5					
RO22 - South-East	7.2					
RO31 - Sud-Muntenia	6.8					
RO32 - Bucuresti-Ilfov	3.4					
RO41 - West	6.5					
RO42	5.7					
RS - Serbia						
RS11 - Belgrade						10.9
RS12 - Vojvodina						10.5
RS21 - Western Serbia						13.8
RS22 - South and East Serbia						16.2
SE - Sweden						
SE11 - Stockholm	5.2	7.1	6.8	7.1	6.5	5.6
SE12 - Eastern Central	6.9	9.5	8.6	8.3	7.7	7.2
SE21 - Småland	5	7.7	7.4	6.7	6.2	5.7
SE22 - South Sweden	7.4	8.6	9.4	10	8.4	8.6
SE23 - Northern Sweden	6.1	8.5	7.7	7.6	6.5	5.6
SE31 - North Central Sweden	6.6	8.7	8.6	8.6	7.5	6.4
SE32 - Middle Norrland	7.1	10.2	8.4	7.4	6.8	5.5
SE33 - Upper Norrland	6.6	9.2	7.7	7.4	5.8	5.4

Notes: *Unemployment Rates by NUTS2 and Year, with design weights.*
Data Source: *EUROSTAT, included in European Social Survey, Multilevel Rounds 4-9 (2008-2018).*

Appendix Section 3 – Complete Regressions and Figures from Main Analysis

Table A5 - Social Participation, Regressed on Unemp. Scarring and Controls, Complete

Dependent Variable	Frequency of Social Participation		
Model No.	1	2	3
Geographical Context	Country	NUTS1	NUTS2
Unemployment Scar (Baseline: Never Scarred)			
Mild Unemp. Scar (>3 Months, >1 year not in last 5 years)	-0.072***	-0.091***	-0.078***
	(0.013)	(0.016)	(0.014)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.089***	-0.091**	-0.091***
	(0.023)	(0.030)	(0.025)
Current Labour Market Position (Baseline - Paid Work)			
In Education	0.397***	0.370***	0.360***
	(0.027)	(0.031)	(0.024)
Unemployed	0.072***	0.075**	0.075**
	(0.021)	(0.027)	(0.023)
Household Income Decile (Baseline: Top Decile)			
Ninth Decile	-0.074***	-0.075**	-0.048*
	(0.018)	(0.027)	(0.023)
Eight Decile	-0.096***	-0.099***	-0.061**
	(0.019)	(0.024)	(0.022)
Seventh Decile	-0.104***	-0.110***	-0.080***
	(0.018)	(0.026)	(0.022)
Sixth Decile	-0.135***	-0.125***	-0.083***
	(0.022)	(0.028)	(0.023)
Fifth Decile	-0.097***	-0.080*	-0.069**
	(0.023)	(0.031)	(0.025)
Fourth Decile	-0.132***	-0.120***	-0.101***
	(0.022)	(0.030)	(0.025)
Third Decile	-0.094***	-0.106**	-0.036
	(0.023)	(0.032)	(0.027)
Second Decile	-0.131***	-0.095**	-0.056
	(0.027)	(0.035)	(0.031)
Bottom Decile	-0.094**	-0.092*	-0.043
	(0.031)	(0.042)	(0.032)
Missing Income	-0.041	-0.055	-0.009
	(0.025)	(0.030)	(0.026)
Age	-0.023***	-0.024***	-0.022***
	(0.001)	(0.001)	(0.001)
Religious	0.038**	0.044**	0.026*
	(0.012)	(0.015)	(0.012)
Gender (Baseline: Woman)	0.048***	0.040**	0.052***
	(0.012)	(0.014)	(0.012)
Born in Country	0.168***	0.201***	0.175***
	(0.023)	(0.029)	(0.026)
Ethnic Minority	-0.058	-0.042	-0.015
	(0.031)	(0.038)	(0.036)
Origin Social Class (EGP) - Baseline: Professional and Technical Occupations			
Higher administrator occupations	0.056**	0.066*	0.062**
	(0.019)	(0.031)	(0.024)
Clerical occupations	-0.044**	-0.031	-0.046*
	(0.016)	(0.022)	(0.020)
Sales occupations	-0.008	-0.005	-0.009
	(0.018)	(0.026)	(0.022)
Service occupations	-0.045**	-0.032	-0.043*
	(0.016)	(0.024)	(0.020)
Skilled workers	-0.063***	-0.042	-0.069***
	(0.015)	(0.023)	(0.020)
Semi-skilled workers	-0.070***	-0.025	-0.071***
	(0.018)	(0.025)	(0.021)
Unskilled worker	-0.128***	-0.107***	-0.131***
	(0.021)	(0.030)	(0.024)
Farm workers	-0.074***	-0.019	-0.074**
	(0.020)	(0.029)	(0.024)
Destination Social Class (ESEC) - Baseline: Large Emps. and Higher Mgrs/Professionals			
Higher Supervisors and Lower Mgrs/Professionals	0.010	0.016	0.005
	(0.013)	(0.019)	(0.015)
Intermediate Occupations	-0.059**	-0.042	-0.064**
	(0.019)	(0.025)	(0.021)
Small Employers and Self-Employed (Non-Agri.)	0.059**	0.040	0.037
	(0.021)	(0.031)	(0.024)
Small Employers and Self-Employed (Agri.)	-0.011	-0.047	-0.042
	(0.026)	(0.045)	(0.037)
Lower Supervisors and Technicians	0.009	-0.025	0.003
	(0.020)	(0.026)	(0.023)
Lower Sales and Service	-0.027	-0.046*	-0.019
	(0.017)	(0.023)	(0.018)
Lower Technical	-0.063**	-0.062*	-0.054*
	(0.019)	(0.028)	(0.022)
Routine	-0.072***	-0.082**	-0.057*
	(0.020)	(0.028)	(0.023)
Level of Education - Baseline: Less than Lower Secondary (ES-ISCED I)			
Not Harmonisable into ES-ISCED	-0.331***	-0.948***	0.274***
	(0.038)	(0.052)	(0.035)
Lower Secondary (ES-ISCED II)	-0.017	-0.023	-0.006
	(0.036)	(0.047)	(0.042)
Upper Secondary, Lower (ES-ISCED IIIb)	-0.041	-0.045	0.002
	(0.038)	(0.050)	(0.042)
Upper Secondary, Higher (ES-ISCED IIIa)	0.021	0.067	0.050
	(0.040)	(0.051)	(0.042)
Advanced Vocational (ES-ISCED IV)	0.020	0.058	0.053
	(0.038)	(0.049)	(0.042)
Lower Tertiary Education (ES-ISCED V1)	0.073	0.101	0.117**
	(0.041)	(0.053)	(0.043)
Higher Tertiary Education (ES-ISCED V2)	0.044	0.078	0.081
	(0.038)	(0.051)	(0.042)
Constant	5.873***	6.527***	5.878***
	(0.062)	(0.073)	(0.058)
Fixed Effects	Country-Year	NUTS1-Year	NUTS2-Year
Robust Standard Errors Clustered around	Country-Year	NUTS1-Year	NUTS2-Year
N	120027	60864	84498
Adj. R^2	18.5%	19.4%	19.9%

Notes: *Coefficients from Linear Regressions, with Context-Year Fixed Effects (Country-Year, NUTS1-Year, NUTS2-Year), Cluster-Robust Standard Errors (Context-Year), and Design Weights.* ***Data Source***: *European Social Survey, Multilevel Rounds 4-9 (2008-2018). * p < 0.05, ** p < 0.01, *** p< 0.001*

Table A6 - Social Participation, Regressed on Unemp. Scarring by Country Unemployment Quartile, Complete

Model No.	4	5	6	7
Context: Country	Bottom Quartile	Second Quartile	Third Quartile	Top Quartile
Unemployment Scar (Baseline: Never Scarred)				
Mild Unemp. Scar (>3 Months, >1 year not in last 5 years)	-0.094**	-0.100***	-0.089**	-0.014
	(0.028)	(0.023)	(0.025)	(0.023)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.204***	-0.107*	-0.135***	0.002
	(0.048)	(0.044)	(0.033)	(0.041)
Current Labour Market Position (Baseline - Paid Work)				
In Education	0.377***	0.460***	0.306***	0.494***
	(0.041)	(0.062)	(0.051)	(0.059)
Unemployed	0.093	0.105	0.061	0.043
	(0.048)	(0.057)	(0.033)	(0.035)
Household Income Decile (Baseline: Top Decile)				
Ninth Decile	-0.040	-0.023	-0.125**	-0.107*
	(0.028)	(0.039)	(0.038)	(0.040)
	(0.018)	(0.027)	(0.023)	
Eight Decile	-0.110***	-0.076*	-0.108***	-0.084
	(0.030)	(0.037)	(0.030)	(0.057)
Seventh Decile	-0.136***	-0.102**	-0.099**	-0.073
	(0.024)	(0.035)	(0.034)	(0.053)
Sixth Decile	-0.173***	-0.127**	-0.140**	-0.088
	(0.033)	(0.045)	(0.040)	(0.057)
Fifth Decile	-0.086**	-0.071	-0.129**	-0.098
	(0.030)	(0.048)	(0.046)	(0.060)
Fourth Decile	-0.131**	-0.075	-0.067	-0.239***
	(0.038)	(0.047)	(0.040)	(0.053)
Third Decile	-0.042	-0.123*	-0.094	-0.118*
	(0.044)	(0.046)	(0.048)	(0.053)
Second Decile	-0.093*	-0.101	-0.094	-0.206***
	(0.040)	(0.065)	(0.063)	(0.051)
Bottom Decile	-0.112	0.036	-0.034	-0.201**
	(0.063)	(0.067)	(0.049)	(0.064)
Missing Income	-0.070	-0.075	0.031	-0.043
	(0.043)	(0.049)	(0.057)	(0.055)
Age	-0.021***	-0.023***	-0.024***	-0.026***
	(0.001)	(0.002)	(0.001)	(0.001)
Religious	0.061**	0.065*	0.032	-0.005
	(0.021)	(0.027)	(0.019)	(0.026)
Gender (Baseline: Woman)	-0.002	0.050*	0.038	0.100***
	(0.027)	(0.023)	(0.021)	(0.024)
Born in Country	0.257***	0.100**	0.161***	0.154*
	(0.037)	(0.029)	(0.042)	(0.057)
Ethnic Minority	-0.027	-0.100*	-0.114**	0.029
	(0.070)	(0.044)	(0.040)	(0.066)
Origin Social Class (EGP) - Baseline: Professional and Technical Occupations				
Higher administrator occupations	0.055	0.030	0.068*	0.074
	(0.033)	(0.047)	(0.033)	(0.043)
Clerical occupations	-0.048	-0.047	-0.053	-0.024
	(0.026)	(0.033)	(0.032)	(0.035)
Sales occupations	-0.040	0.023	-0.022	-0.001
	(0.028)	(0.041)	(0.035)	(0.034)
Service occupations	-0.073*	0.028	-0.057	-0.073*
	(0.030)	(0.033)	(0.030)	(0.029)
Skilled workers	-0.078*	-0.054	-0.033	-0.090*
	(0.030)	(0.029)	(0.032)	(0.036)
Semi-skilled workers	-0.061	-0.120*	-0.075**	-0.038
	(0.037)	(0.046)	(0.026)	(0.037)
Unskilled worker	-0.112**	-0.125*	-0.095*	-0.168***
	(0.041)	(0.048)	(0.044)	(0.036)
Farm workers	-0.087	-0.071*	-0.060	-0.075
	(0.043)	(0.033)	(0.031)	(0.045)
Destination Social Class (ESEC) - Baseline: Large Emps. and Higher Mgrs/Professionals				
Higher Supervisors and Lower Mgrs/Professionals	-0.008	0.031	0.001	0.018
	(0.022)	(0.029)	(0.026)	(0.028)
Intermediate Occupations	-0.098**	-0.046	-0.048	-0.040
	(0.036)	(0.035)	(0.035)	(0.042)
Small Employers and Self-Employed (Non-Agri.)	0.061	0.109*	0.014	0.058
	(0.031)	(0.044)	(0.045)	(0.042)
Small Employers and Self-Employed (Agri.)	0.029	0.048	-0.042	-0.034
	(0.045)	(0.047)	(0.042)	(0.065)
Lower Supervisors and Technicians	-0.011	0.089	-0.001	-0.037
	(0.025)	(0.044)	(0.038)	(0.048)
Lower Sales and Service	-0.084**	-0.032	0.006	-0.010
	(0.026)	(0.035)	(0.032)	(0.042)
Lower Technical	-0.099*	-0.072	-0.023	-0.061
	(0.037)	(0.038)	(0.038)	(0.042)
Routine	-0.087*	-0.046	-0.091*	-0.062
	(0.034)	(0.038)	(0.039)	(0.046)
Level of Education - Baseline: Less than Lower Secondary (ES-ISCED I)				
Not Harmonisable into ES-ISCED	-0.579***	0.458***	-0.681***	
	(0.107)	(0.073)	(0.069)	
Lower Secondary (ES-ISCED II)	0.046	-0.062	-0.070	-0.007
	(0.099)	(0.071)	(0.067)	(0.056)
Upper Secondary, Lower (ES-ISCED IIIb)	0.047	-0.046	-0.116	-0.097
	(0.097)	(0.075)	(0.070)	(0.064)
Upper Secondary, Higher (ES-ISCED IIIa)	0.075	0.037	-0.043	-0.013
	(0.102)	(0.068)	(0.069)	(0.070)
Advanced Vocational (ES-ISCED IV)	0.113	-0.008	-0.046	-0.016
	(0.100)	(0.065)	(0.069)	(0.062)
Lower Tertiary Education (ES-ISCED V1)	0.121	0.079	-0.009	0.074
	(0.099)	(0.071)	(0.076)	(0.076)
Higher Tertiary Education (ES-ISCED V2)	0.097	0.077	-0.027	0.010
	(0.089)	(0.073)	(0.072)	(0.066)
Constant	5.791***	5.879***	6.244***	6.159***
	(0.106)	(0.138)	(0.121)	(0.144)
Fixed Effects	Country-Year	Country-Year	Country-Year	Country-Year
Robust Standard Errors Clustered around	Country-Year	Country-Year	Country-Year	Country-Year
N	29541	28404	32316	29766
Adj. R^2	19.4%	15.2%	18%	21%

Notes: *Coefficients from Linear Regressions, with Country-Year Fixed Effects, Cluster-Robust Standard Errors (Country-Year), and Design Weights.* **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018). * p < 0.05, ** p < 0.01, *** p< 0.001*

Table A7 - Social Participation, Regressed on Unemp. Scarring by NUTS1 Unemployment Quartile, Complete

Model No.	8	9	10	11
Context: NUTS1 - Macro-Region	Bottom Quartile	Second Quartile	Third Quartile	Top Quartile
Unemployment Scar (Baseline: Never Scarred)				
Mild Unemp. Scar (>3 Months, >1 year not in last 5 years)	-0.103***	-0.118***	-0.101***	-0.012
	(0.028)	(0.026)	(0.028)	(0.028)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.214***	-0.157**	-0.102**	-0.017
	(0.058)	(0.054)	(0.035)	(0.043)
Current Labour Market Position (Baseline - Paid Work)				
In Education	0.443***	0.428***	0.269***	0.420***
	(0.046)	(0.063)	(0.049)	(0.050)
Unemployed	0.083	0.142*	0.033	0.039
	(0.072)	(0.057)	(0.037)	(0.036)
Household Income Decile (Baseline: Top Decile)				
Ninth Decile	-0.075	-0.019	-0.057	-0.162**
	(0.050)	(0.045)	(0.042)	(0.056)
Eight Decile	-0.109*	-0.073	-0.101**	-0.048
	(0.042)	(0.041)	(0.034)	(0.050)
Seventh Decile	-0.181***	-0.051	-0.074*	-0.086
	(0.044)	(0.043)	(0.037)	(0.051)
Sixth Decile	-0.177***	-0.114*	-0.112**	-0.071
	(0.048)	(0.045)	(0.040)	(0.053)
Fifth Decile	-0.085	-0.091	-0.093*	-0.091
	(0.060)	(0.051)	(0.044)	(0.063)
Fourth Decile	-0.076	-0.075	-0.048	-0.260***
	(0.055)	(0.055)	(0.045)	(0.057)
Third Decile	-0.140*	-0.057	-0.023	-0.148*
	(0.061)	(0.059)	(0.042)	(0.061)
Second Decile	-0.163**	-0.038	-0.051	-0.207***
	(0.062)	(0.073)	(0.062)	(0.060)
Bottom Decile	-0.104	0.014	0.044	-0.193**
	(0.082)	(0.069)	(0.052)	(0.072)
Missing Income	-0.121*	-0.065	0.073	-0.054
	(0.060)	(0.052)	(0.046)	(0.061)
Age	-0.022***	-0.022***	-0.024***	-0.024***
	(0.001)	(0.001)	(0.001)	(0.001)
Religious	0.098***	0.046	0.048**	-0.028
	(0.029)	(0.027)	(0.018)	(0.028)
Gender (Baseline: Woman)	-0.022	0.066**	0.042	0.123***
	(0.026)	(0.025)	(0.022)	(0.024)
Born in Country	0.265***	0.094*	0.177***	0.156**
	(0.052)	(0.045)	(0.041)	(0.059)
Ethnic Minority	-0.066	-0.020	-0.100	0.050
	(0.074)	(0.057)	(0.051)	(0.070)
Origin Social Class (EGP) - Baseline: Professional and Technical Occupations				
Higher administrator occupations	0.112	0.032	0.039	0.114
	(0.061)	(0.049)	(0.038)	(0.058)
Clerical occupations	0.003	-0.031	-0.072*	0.007
	(0.043)	(0.040)	(0.032)	(0.037)
Sales occupations	-0.039	0.026	-0.056	0.021
	(0.047)	(0.050)	(0.037)	(0.041)
Service occupations	-0.028	0.031	-0.074*	-0.072*
	(0.046)	(0.038)	(0.034)	(0.036)
Skilled workers	-0.029	-0.038	-0.034	-0.099*
	(0.046)	(0.034)	(0.035)	(0.044)
Semi-skilled workers	-0.035	-0.113***	-0.080**	-0.028
	(0.053)	(0.032)	(0.030)	(0.042)
Unskilled worker	-0.142*	-0.146**	-0.081	-0.167***
	(0.059)	(0.048)	(0.046)	(0.043)
Farm workers	0.038	-0.088*	-0.051	-0.032
	(0.062)	(0.040)	(0.037)	(0.053)
Destination Social Class (ESEC) - Baseline: Large Emps. and Higher Mgrs/Professionals				
Higher Supervisors and Lower Mgrs/Professionals	0.036	0.040	0.002	0.003
	(0.029)	(0.031)	(0.024)	(0.035)
Intermediate Occupations	-0.073	-0.024	-0.067*	-0.051
	(0.052)	(0.041)	(0.031)	(0.049)
Small Employers and Self-Employed (Non-Agri.)	0.061	0.105*	0.026	0.039
	(0.059)	(0.049)	(0.046)	(0.048)
Small Employers and Self-Employed (Agri.)	-0.012	0.011	-0.056	-0.046
	(0.052)	(0.081)	(0.071)	(0.068)
Lower Supervisors and Technicians	-0.005	0.108*	0.005	-0.052
	(0.047)	(0.047)	(0.039)	(0.055)
Lower Sales and Service	-0.092*	0.020	-0.014	0.007
	(0.042)	(0.032)	(0.034)	(0.044)
Lower Technical	-0.121*	-0.004	-0.038	-0.066
	(0.056)	(0.042)	(0.036)	(0.050)
Routine	-0.101	-0.001	-0.099**	-0.048
	(0.057)	(0.041)	(0.034)	(0.058)
Level of Education - Baseline: Less than Lower Secondary (ES-ISCED I)				
Not Harmonisable into ES-ISCED	1.840***	1.227***	0.089	-0.714***
	(0.127)	(0.083)	(0.086)	(0.057)
Lower Secondary (ES-ISCED II)	0.040	-0.152	-0.031	0.002
	(0.104)	(0.083)	(0.073)	(0.055)
Upper Secondary, Lower (ES-ISCED IIIb)	0.002	-0.038	-0.104	-0.073
	(0.112)	(0.081)	(0.072)	(0.068)
Upper Secondary, Higher (ES-ISCED IIIa)	0.124	0.047	0.003	0.014
	(0.109)	(0.081)	(0.074)	(0.069)
Advanced Vocational (ES-ISCED IV)	0.102	-0.035	0.014	-0.002
	(0.113)	(0.082)	(0.070)	(0.063)
Lower Tertiary Education (ES-ISCED V1)	0.130	0.100	0.012	0.112
	(0.114)	(0.087)	(0.075)	(0.074)
Higher Tertiary Education (ES-ISCED V2)	0.112	0.072	0.039	0.032
	(0.118)	(0.081)	(0.076)	(0.065)
Constant	4.725***	5.226***	5.463***	5.373***
	(0.152)	(0.130)	(0.136)	(0.139)
Fixed Effects	NUTS1-Year	NUTS1-Year	NUTS1-Year	NUTS1-Year
Robust Standard Errors Clustered around	NUTS1-Year	NUTS1-Year	NUTS1-Year	NUTS1-Year
N	16259	21673	28839	23499
Adj. R^2	19.4%	17.3%	16.2%	19.7%

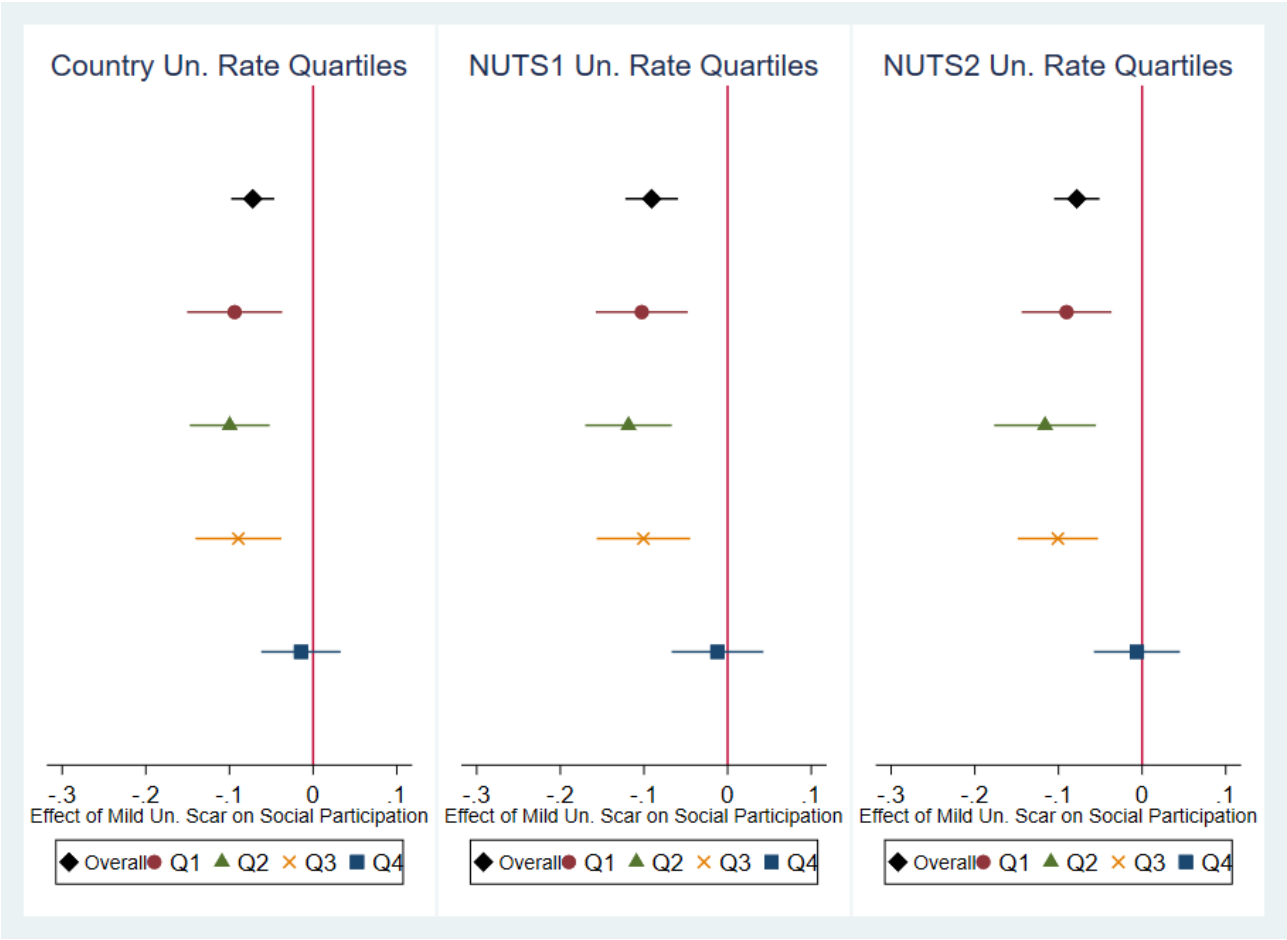
Notes: *Coefficients from Linear Regressions, with NUTS1-Year Fixed Effects, Cluster-Robust Standard Errors (NUTS1-Year), and Design Weights.* **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018). * p < 0.05, ** p < 0.01, *** p< 0.001*

Table A8 - Social Participation, Regressed on Unemp. Scarring by NUTS2 Unemployment Quartile, Complete

Model No.	12	13	14	15
Context: NUTS2 - Region	Bottom Quartile	Second Quartile	Third Quartile	Top Quartile
Unemployment Scar (Baseline: Never Scarred)				
Mild Unemp. Scar (>3 Months, >1 year not in last 5 years)	-0.090**	-0.116***	-0.101***	-0.006
	(0.027)	(0.031)	(0.024)	(0.026)
Severe Unemp. Scar (>1 Year in last 5 years)	-0.270***	-0.079	-0.104*	-0.031
	(0.068)	(0.047)	(0.045)	(0.042)
Current Labour Market Position (Baseline - Paid Work)				
In Education	0.398***	0.372***	0.277***	0.424***
	(0.037)	(0.048)	(0.049)	(0.053)
Unemployed	0.159*	0.043	0.006	0.101**
	(0.068)	(0.045)	(0.047)	(0.037)
Household Income Decile (Baseline: Top Decile)				
Ninth Decile	0.016	-0.086*	0.021	-0.195***
	(0.043)	(0.038)	(0.046)	(0.056)
Eight Decile	-0.066	-0.067	-0.067	-0.057
	(0.042)	(0.044)	(0.040)	(0.050)
Seventh Decile	-0.095*	-0.039	-0.079	-0.134**
	(0.044)	(0.043)	(0.044)	(0.049)
Sixth Decile	-0.086	-0.101*	-0.062	-0.107*
	(0.045)	(0.046)	(0.046)	(0.052)
Fifth Decile	-0.081	-0.041	-0.048	-0.128*
	(0.045)	(0.055)	(0.050)	(0.054)
Fourth Decile	-0.054	-0.059	-0.030	-0.264***
	(0.046)	(0.055)	(0.046)	(0.055)
Third Decile	0.001	-0.036	0.001	-0.130*
	(0.054)	(0.056)	(0.048)	(0.059)
Second Decile	0.022	-0.040	-0.014	-0.188**
	(0.059)	(0.067)	(0.059)	(0.062)
Bottom Decile	-0.098	-0.021	0.089	-0.185**
	(0.067)	(0.065)	(0.055)	(0.067)
Missing Income	-0.039	-0.016	0.058	-0.066
	(0.050)	(0.053)	(0.046)	(0.055)
Age	-0.020***	-0.021***	-0.023***	-0.024***
	(0.001)	(0.001)	(0.001)	(0.001)
Religious	0.050*	0.017	0.049*	-0.009
	(0.025)	(0.023)	(0.021)	(0.028)
Gender (Baseline: Woman)	0.018	0.019	0.045	0.121***
	(0.024)	(0.023)	(0.026)	(0.023)
Born in Country	0.248***	0.154**	0.129**	0.157**
	(0.050)	(0.047)	(0.048)	(0.058)
Ethnic Minority	-0.005	-0.041	-0.091	0.064
	(0.056)	(0.058)	(0.074)	(0.082)
Origin Social Class (EGP) - Baseline: Professional and Technical Occupations				
Higher administrator occupations	0.060	0.051	-0.006	0.186***
	(0.045)	(0.045)	(0.046)	(0.055)
Clerical occupations	-0.055	-0.015	-0.104**	0.002
	(0.033)	(0.041)	(0.039)	(0.045)
Sales occupations	-0.072	0.039	-0.061	0.062
	(0.040)	(0.041)	(0.044)	(0.048)
Service occupations	-0.032	0.007	-0.100*	-0.046
	(0.035)	(0.042)	(0.039)	(0.045)
Skilled workers	-0.098**	-0.048	-0.077	-0.047
	(0.035)	(0.033)	(0.043)	(0.046)
Semi-skilled workers	-0.039	-0.080	-0.127**	-0.024
	(0.042)	(0.041)	(0.040)	(0.047)
Unskilled worker	-0.153**	-0.099*	-0.119*	-0.136**
	(0.049)	(0.043)	(0.052)	(0.048)
Farm workers	-0.160***	-0.040	-0.096*	-0.022
	(0.043)	(0.044)	(0.047)	(0.055)
Destination Social Class (ESEC) - Baseline: Large Emps. and Higher Mgrs/Professionals				
Higher Supervisors and Lower Mgrs/Professionals	-0.021	0.013	0.011	0.023
	(0.027)	(0.029)	(0.029)	(0.035)
Intermediate Occupations	-0.138***	0.004	-0.087*	-0.030
	(0.040)	(0.039)	(0.040)	(0.049)
Small Employers and Self-Employed (Non-Agri.)	-0.023	0.100	0.004	0.070
(0.046)	(0.051)	(0.041)	(0.051)	
Small Employers and Self-Employed (Agri.)	-0.038	-0.062	0.022	-0.066
	(0.068)	(0.070)	(0.082)	(0.073)
Lower Supervisors and Technicians	0.012	0.022	0.001	-0.005
	(0.041)	(0.044)	(0.044)	(0.059)
Lower Sales and Service	-0.068*	-0.021	-0.009	0.022
	(0.033)	(0.033)	(0.036)	(0.045)
Lower Technical	-0.091*	-0.013	-0.109**	0.004
	(0.042)	(0.041)	(0.041)	(0.048)
Routine	-0.097*	-0.024	-0.108*	0.002
	(0.046)	(0.045)	(0.043)	(0.051)
Level of Education - Baseline: Less than Lower Secondary (ES-ISCED I)				
Not Harmonisable into ES-ISCED	-0.361**	-0.186	0.308***	
	(0.132)	(0.096)	(0.055)	
Lower Secondary (ES-ISCED II)	0.177	-0.069	0.050	-0.034
	(0.131)	(0.101)	(0.068)	(0.063)
Upper Secondary, Lower (ES-ISCED IIIb)	0.176	0.053	0.042	-0.137
	(0.132)	(0.100)	(0.067)	(0.071)
Upper Secondary, Higher (ES-ISCED IIIa)	0.213	0.085	0.104	-0.049
	(0.135)	(0.099)	(0.059)	(0.069)
Advanced Vocational (ES-ISCED IV)	0.220	0.031	0.097	0.005
	(0.134)	(0.103)	(0.061)	(0.071)
Lower Tertiary Education (ES-ISCED V1)	0.271*	0.132	0.109	0.100
	(0.132)	(0.105)	(0.067)	(0.070)
Higher Tertiary Education (ES-ISCED V2)	0.242	0.061	0.136*	0.041
	(0.135)	(0.102)	(0.068)	(0.067)
Constant	5.937***	6.050***	5.942***	6.318***
	(0.155)	(0.136)	(0.107)	(0.123)
Fixed Effects	NUTS2-Year	NUTS2-Year	NUTS2-Year	NUTS2-Year
Robust Standard Errors Clustered around	NUTS2-Year	NUTS2-Year	NUTS2-Year	NUTS2-Year
N	20670	20868	21412	21548
Adj. R^2	20%	20.1%	19.4%	20.3%

Notes: *Coefficients from Linear Regressions, with NUTS2-Year Fixed Effects, Cluster-Robust Standard Errors (NUTS2-Year), and Design Weights.* **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018). * p < 0.05, ** p < 0.01, *** p< 0.001*

Figure A1 – Coefficients for Mild Unemployment Scars, by Context and Quartile



Notes: *Mild Unemployment Scar Coefficients from Linear Regressions with 95% Confidence Intervals, baseline: Never Scarred. Obtained from Models in Table 2 (Overall), and Table 3 (Quartiles). Latter are conducted separately for each quartile of the contextual unemployment rate (Q1 – Bottom, Q2 – Second, Q3 – Third, Q4 – Top), respectively for Countries, NUTS1, and NUTS2 contexts. Socio-Demographic controls included, together with Context-Year Fixed Effects (Country-Year, NUTS1-Year, NUTS2-Year), Cluster-Robust Standard Errors (Context-Year), and Design Weights.* **Data Source**: *European Social Survey, Multilevel Rounds 4-9 (2008-2018).*