Social Inclusion (ISSN: 2183-2803) 2023, Volume 11, Issue 1, Pages X–X https://doi.org/10.17645/si.v11i1.5875

4 Supplementary File

5 **Table A1.** Description of variables used.

Variable	Operationalisation	Data source
Microlevel		
Subjective financial stress	"Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?" (recoded: 1: Very easily; 2 "Easily"; 3 "Fairly easily"; 4 "With some difficulty"; 5 "With difficulty"; 6: With great difficulty).	EU-SILC (hs120)
Ownership status	0: tenant/subtenant; 1: Outright owner, 2: owner paying mortgage.	EU-SILC (hh021)
Short-term unemployed	Employed, unemployed or inactive persons who were unemployed for 1–11 months in the previous year, regardless of their current employment situation, plus the currently unemployed who were not unemployed in the previous year. The short-term unemployment risk is operationalised as the risk of all economically active persons (plus the unemployed person who left the labour force in the previous year) to be unemployed for a short period of time.	EU-SILC (pl030, pl031, pl080)
Age	1: 15–24 years, 2: 25–54 years, 3: 55 years and older.	EU-SILC (rx020)
Household type	1: single-person household; 2: adults, no children, 3: single parents, 4: adults with children.	EU-SILC (hx060)
Educational level	Highest level of education attained according to ISCED (high/3: tertiary education – levels 5–6; medium/2: secondary and post-secondary, non-tertiary education (3–4); low/1: primary and lower secondary (0–2). The latter category is also designated as low education or educational poverty.	EU-SILC (pe040)
Social class (ESEC5)	1: Upper service class; salariat (ESEC1–2); 2: Intermediate employees (ESEC3&6); 3: Small employers, self-employed (ESEC4&5), 4: Lower sales and service occupations (ESEC7), 5: Lower technical and routine occupations (ESEC8&9). See Rose and Harrison (2010).	EU-SILC (pl050; pl051, pl40, pl031, pl130, pl150).
Urbanisation	1: Densely populated area, 2: Intermediate area, 3: Thinly populated area.	EU-SILC (db100)
Disposable income	Net equivalent household income (adjusted for purchasing power and inflation (HICP), top and bottom coding).	EU-SILC (hx090)
Housing costs	Housing costs as a percentage of disposable income ('net' of housing allowances)	EU-SILC (hh070, hy020, hy070g)
Macrolevel		1



National mean of disposable income	Average national disposable income (adjusted for purchasing power and inflation)	EU-SILC (hx090).
Welfare regimes	1: "Liberal countries" (IE = Ireland, UK = United Kingdom); 2: "Corporatist-conservative countries" (AT = Austria, BE = Belgium, DE = Germany, FR = France, LU = Luxembourg, CH = Switzerland); 3: "Mediterranean countries (CY= Cyprus, EL = Greece, ES = Spain, IT = Italy, MT = Malta, PT = Portugal); 4: "Post-socialist countries" (BG = Bulgaria, CZ = Czech Republic, EE = Estonia, HU = Hungary, LT = Lithuania, LV = Latvia, PL = Poland, SK = Slovakia, RO = Romania); 5: "Nordic countries" (FI = Finland, SE = Sweden, NO = Norway).	Based on Gallie (2007).
Mortgage (% of disposable income)	National mean of annual mortgage payments (principal repayments for the main dwelling) of indebted house owners as a percentage of disposable income.	EU-SILC (hh071, hy020)
Average national housing costs for tenants and indebted homeowners	Housing costs for tenants and indebted homeowners as a percentage of disposable income ('net' of housing allowances)	EU-SILC (hh070, hy020, hy070g)
Household debt (in % of GDP)	Household debt, consolidated (% of GDP)	OECD, table [TIPSPD22]; IMF.
Net replacement rate (NRR)	Ratio of net income for short-term unemployed (7 months) divided by net income while in work for a couple with two children, one earner and average earnings.	European Commission, tax and benefit database

Table A2. Homeownership and national welfare as determinants of subjective financial stress (2010–2018).

	Regime & 3- way interaction (1)	Individual controls (2)	Replacement rate (3)	Replacement rate & 3-way (4)	Replacement rate & national controls (5)
year (ref. 2010)					
-2011	-0.0026	0.0196***	0.0207***	0.0206***	0.0172***
	(0.0041)	(0.0037)	(0.0037)	(0.0037)	(0.0038)
-2012	0.0238***	0.0355***	0.0386***	0.0385***	0.0361***
	(0.0040)	(0.0037)	(0.0037)	(0.0037)	(0.0037)
-2013	0.0703***	0.0906***	0.0955***	0.0954***	0.1015***
	(0.0040)	(0.0037)	(0.0038)	(0.0038)	(0.0038)
-2014	0.0321***	0.0563***	0.0621***	0.0619***	0.0652***



(0.0040) (0.0037) (0.0038) (0.0038) (0.0039)						
(0.0041) (0.0037) (0.0038) (0.0038) (0.0040) -2016		(0.0040)	(0.0037)	(0.0038)	(0.0038)	(0.0039)
-2016	-2015	-0.0381***	0.0016	0.0063	0.0061	0.0115**
(0.0040) (0.0037) (0.0037) (0.0037) (0.0037) (0.0040) -2017		(0.0041)	(0.0037)	(0.0038)	(0.0038)	(0.0040)
-2017	-2016	-0.0870***	-0.0250***	-0.0212***	-0.0214***	-0.0099*
(0.0040) (0.0037) (0.0037) (0.0037) (0.0040) -2018		(0.0040)	(0.0037)	(0.0037)	(0.0037)	(0.0040)
-2018	-2017	-0.1463***	-0.0802***	-0.0765***	-0.0770***	-0.0665***
Ownership (ref. tenants) -0.8795* -0.3193* -0.3192 -0.3874* -0.4001* - Owners without debts -0.8795* -0.3193* -0.3192 -0.3874* -0.4001* - Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 - Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 - Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 - Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 - Owners paying mortgage -0.4580 -0.0842 0.0048 0.0048 0.0048 - Owners paying mortgage -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** - Owners paying mortgage -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** - Owners paying mortgage -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571***		(0.0040)	(0.0037)	(0.0037)	(0.0037)	(0.0040)
Ownership (ref. tenants) - Owners without debts -0.8795* -0.3193* -0.3192 -0.3874* -0.4001* (0.3911) (0.1610) (0.1664) (0.1668) (0.1682) - Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 (0.3911) (0.1611) (0.1664) (0.1676) (0.1691) Age group (ref. 25–54 years) 15 to 24 years -0.0048 -0.0048 -0.0048 -0.0048 -0.0048 -0.0046 (0.0037) (0.0037) (0.0037) (0.0037) 55 years and older -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** (0.0021) (0.0021) (0.0021) (0.0021) Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0311*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) (0.0021)	-2018	-0.2118***	-0.1350***	-0.1315***	-0.1320***	-0.1164***
- Owners without debts		(0.0040)	(0.0037)	(0.0037)	(0.0037)	(0.0041)
- Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 (0.3911) (0.1611) (0.1664) (0.1664) (0.1676) (0.1691) Age group (ref. 25–54 years) 15 to 24 years -0.0048 -0.0048 -0.0048 -0.0048 -0.0048 -0.0046 (0.0037) (0.0037) (0.0037) (0.0037) (0.0037) 55 years and older -0.0571*** -0.0571*** -0.0571*** -0.0571*** (0.0021) (0.0021) (0.0021) (0.0021) Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) (0.0021) Single parent household -0.3382*** 0.3382*** 0.3382*** 0.3382*** 0.3394***	Ownership (ref. tenants)					
- Owners paying mortgage -0.4580 -0.0852 -0.0853 -0.1235 -0.1140 (0.3911) (0.1611) (0.1664) (0.1676) (0.1691) Age group (ref. 25–54 years) 15 to 24 years 0.0048 0.0048 0.0048 0.0048 0.0046 (0.0037) (0.0037) (0.0037) (0.0037) 55 years and older -0.0571*** -0.0571*** -0.0571*** -0.0571*** (0.0021) (0.0021) (0.0021) (0.0021) Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0310*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) (0.0021) Single parent household -0.3382*** 0.3382*** 0.3382*** 0.3382***	- Owners without debts	-0.8795*	-0.3193*	-0.3192	-0.3874*	-0.4001*
(0.3911) (0.1611) (0.1664) (0.1676) (0.1691) Age group (ref. 25–54 years) 15 to 24 years 0.0048 0.0048 0.0048 0.0048 0.0037) (0.0037) (0.0037) (0.0037) 55 years and older -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0021) (0.0021) (0.0021) Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0310*** -0.0310*** -0.0310*** -0.0310*** -0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893***		(0.3911)	(0.1610)	(0.1664)	(0.1668)	(0.1682)
Age group (ref. 25–54 years) 15 to 24 years 0.0048 0.0048 0.0037) (0.0037) (0.0037) (0.0037) (0.0037) 55 years and older -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0571*** -0.0021) Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0310*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.03382*** 0.3382*** 0.3382*** 0.3382***	- Owners paying mortgage	-0.4580	-0.0852	-0.0853	-0.1235	-0.1140
15 to 24 years		(0.3911)	(0.1611)	(0.1664)	(0.1676)	(0.1691)
(0.0037) (0.0037) (0.0037) (0.0037) 55 years and older -0.0571*** -0.0571*** -0.0571*** -0.0571*** (0.0021) (0.0021) (0.0021) Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***	Age group (ref. 25–54 years)					
55 years and older	15 to 24 years		0.0048	0.0048	0.0048	0.0046
(0.0021) (0.0021) (0.0021) (0.0021)			(0.0037)	(0.0037)	(0.0037)	(0.0037)
Household type (ref. Adults with children) One person household -0.0310*** -0.0310*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***	55 years and older		-0.0571***	-0.0571***	-0.0571***	-0.0571***
Children) One person household -0.0310*** -0.0310*** -0.0311*** -0.0296*** (0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) (0.0021) Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***			(0.0021)	(0.0021)	(0.0021)	(0.0021)
(0.0029) (0.0029) (0.0029) (0.0029) Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***						
Adults, no children -0.0893*** -0.0893*** -0.0893*** -0.0891*** (0.0021) (0.0021) (0.0021) (0.0021) Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***	One person household		-0.0310***	-0.0310***	-0.0311***	-0.0296***
(0.0021) (0.0021) (0.0021) (0.0021) Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***			(0.0029)	(0.0029)	(0.0029)	(0.0029)
Single parent household 0.3382*** 0.3382*** 0.3382*** 0.3394***	Adults, no children		-0.0893***	-0.0893***	-0.0893***	-0.0891***
			(0.0021)	(0.0021)	(0.0021)	(0.0021)
(0.0056) (0.0056) (0.0056)	Single parent household		0.3382***	0.3382***	0.3382***	0.3394***
			(0.0056)	(0.0056)	(0.0056)	(0.0056)

Education (Ref. high)



Low education (ISCED 0–2)	0.3481***	0.3482***	0.3481***	0.3491***
	(0.0029)	(0.0029)	(0.0029)	(0.0029)
Medium education (ISCED 3–4)	0.1898***	0.1898***	0.1898***	0.1906***
	(0.0023)	(0.0023)	(0.0023)	(0.0023)
Social class (ref. Lower technical and routine work)				
Salariat	-0.3189***	-0.3188***	-0.3189***	-0.3193***
	(0.0025)	(0.0025)	(0.0025)	(0.0025)
Intermediate employees	-0.1790***	-0.1790***	-0.1791***	-0.1800***
	(0.0028)	(0.0028)	(0.0028)	(0.0028)
Small employers and self-employed	-0.2543***	-0.2543***	-0.2543***	-0.2529***
	(0.0037)	(0.0037)	(0.0037)	(0.0037)
Lower sales and service tasks	-0.0686***	-0.0686***	-0.0686***	-0.0685***
	(0.0026)	(0.0026)	(0.0026)	(0.0026)
Urbanisation (ref. thinly populated area)				
Densely-populated area	0.0280***	0.0283***	0.0282***	0.0273***
	(0.0020)	(0.0020)	(0.0020)	(0.0020)
Intermediate area	0.0067**	0.0071**	0.0071**	0.0044*
	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Housing cost (% of disposable income)	0.0026***	0.0026***	0.0026***	0.0025***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Housing cost indebted owner				-0.0015***
				(0.0001)
Housing cost tenant				0.0072***
				(0.0002)
Mortgage (% of disposable income)				0.0002
				(0.0001)
Disposable income	-0.4174***	-0.4176***	-0.4176***	-0.4165***



		(0.0016)	(0.0016)	(0.0016)	(0.0016)
National median income					-0.0286*
					(0.0114)
Disposable income x national median					-0.0112***
income					(0.0036)
					(0.0026)
Household debt (in % of GDP)					0.0027***
					(0.0002)
Short-term unemployed	0.3731***	0.2599***	0.2601***	0.1505***	0.1551***
	(0.0317)	(0.0064)	(0.0064)	(0.0190)	(0.0190)
Short-term unemployed * Owners without debts	-0.0784	-0.0296***	-0.0295***	0.0925***	0.0900***
	(0.0508)	(0.0081)	(0.0081)	(0.0219)	(0.0219)
Short-term unemployed * Owners paying mortgage	0.0020	0.0002	0.0001	0.0282	0.0262
	(0.0465)	(0.0099)	(0.0099)	(0.0302)	(0.0301)
Regime (ref. Liberal)					
Corporatist-conservative	-0.6562*				
	(0.3193)				
Mediterranean	0.4752				
	(0.3193)				
Post-Socialist	0.4262				
	(0.3030)				
Nordic	-1.1171**				
	(0.3570)				
Corporatist-conservative * Owners without debts	0.1357				
	(0.4516)				
Corporatist-conservative * Owners paying mortgage	0.0333				



(0.4516)
0.4478
(0.4515)
0.2020
(0.4516)
0.6423
(0.4284)
0.1143
(0.4285)
0.0186
(0.5049)
-0.0298
(0.5049)
0.1458***
(0.0341)
(0.0341)
-0.0160
-0.0160 (0.0339)
-0.0160 (0.0339) -0.0047
-0.0160 (0.0339) -0.0047 (0.0350)
-0.0160 (0.0339) -0.0047 (0.0350) 0.1397***
-0.0160 (0.0339) -0.0047 (0.0350) 0.1397*** (0.0383)
-0.0160 (0.0339) -0.0047 (0.0350) 0.1397*** (0.0383) -0.0685



Mediterranean * Owners without debts * short-term unemployed	0.1244*			
	(0.0530)			
Mediterranean * Owners paying mortgage * short-term unemployed	0.1116*			
	(0.0499)			
Post-Socialist * Owners without debts * short-term unemployed	0.0937			
	(0.0534)			
Post-Socialist * Owners paying mortgage * short-term unemployed	0.0917			
	(0.0528)			
Nordic * Owners without debts * short- term unemployed	-0.0726			
	(0.0607)			
Nordic * Owners paying mortgage * short-term unemployed	-0.1212*			
	(0.0546)			
Net replacement rate		0.0009***	-0.0002	-0.0005
		(0.0001)	(0.0003)	(0.0003)
Replacement rate * Owners without debts			0.0013***	0.0016***
			(0.0004)	(0.0004)
Replacement rate * Owners paying mortgage			0.0008	0.0006
			(0.0005)	(0.0005)
Replacement rate * Short-term unemployed			0.0020***	0.0019***
			(0.0003)	(0.0003)
Replacement rate * Short-term unemployed * Owners without debts			-0.0022***	-0.0022***
			(0.0004)	(0.0004)
Replacement rate * Short-term				



				(0.0005)	(0.0005)
Constant	4.0535***	3.9041***	3.9005***	3.9130***	3.9225***
	(0.2766)	(0.1139)	(0.1177)	(0.1185)	(0.1196)
Respondents	1503456	1503456	1503456	1503456	1503456
Wald Chi ²	22357	306417	306474	306548	308564
McFadden pseudo-R ²	0.327	0.433	0.433	0.433	0.433
AIC	4499629	4242597	4242833	4242851	4241268

Notes: Linear multi-level models for active persons (without apprentices, 25–64 years) and 27 European countries; dependent variable: subjective financial stress; independent and control variables cf. Table A1. Standard errors in parenthesis. Sources: Authors' calculations on the basis of EU-SILC 2010–2018 and Eurostat data. Legend: * p<0.05, ** p<0.01, *** p<0.001.

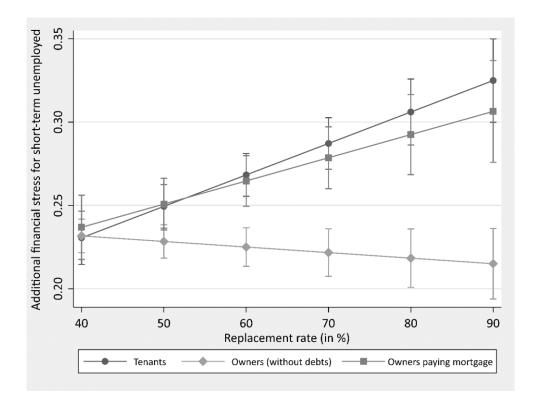


Figure A1: Additional financial stress of short-term unemployment – as a function of the net replacement rate and homeownership (2010–2018; 27 European countries; with controls for national context (average national income,



- average national mortgage burden (in % of disposable income of indebted owners); average national housing costs for
- indebted owners and tenants; private household debts; cf. model 5 in Table 2 in the main text). Source: EU-SILC 2010–
- 20 2018.
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