

Crafting Social Integration? Welfare State and Volunteering Across Social Groups and Policy Areas in 23 European Countries.

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Online Appendix

Table A1: Variables, data source and summary statistics

Variable	N	Mean	SD	Min	Max	Data source^a
Voluntary work	29,024	0.28		0	1	Q5, v21
Mean replacement rate	21	0.57 (58.2)	0.22 (10.6)	0 (31.0)	1 (78.9)	Scruggs, Jahn and Kuitto, 2017, US100; UC1000; SS100; SC1000; MPS100; MPC1000
Unemployment replacement rate	21	0.61 (61.1)	0.27 (14.6)	0 (28.6)	1 (82.4)	Scruggs, Jahn and Kuitto, 2017, US100; UC1000
Pension replacement rate	21	0.39 (36.8)	0.27 (13.4)	0 (17.2)	1 (67.1)	Scruggs, Jahn and Kuitto, 2017, MPS100; MPC1000
Total social expenditure	23	0.51 (23.3)	0.32 (5.6)	0 (14.4)	1 (31.7)	Eurostat, 2021, spr_exp_gdp, SPBENEFNORERO UTE, TOTAL
Unemployment social expenditure	23	0.37 (0.9)	0.28 (0.6)	0 (0.1)	1 (2.2)	Eurostat, 2021, spr_exp_gdp, SPBENEFNORERO UTE, UNEMPLOY
Pension social expenditure	23	0.46 (9.5)	0.31 (2.4)	0 (6.1)	1 (13.6)	Eurostat, 2021, spr_exp_gdp, SPBENEFNORERO UTE, OLD
Age	29,024	51	17	18	82	Q64, age
Gender (1: male)	29,024	0.47		0	1	Q63, v225
Education	29,024	4.0	1.9	0	8	Q81, v243_ISCED_1
Household income	29,024	5.5	2.8	1	10	Q98, v261
Marital status: single	29,024	0.25		0	1	Q72, v234 = 6
Marital status: married/reg. partnership	29,024	0.55		0	1	Q72, v234 = 1;2
Marital status: widowed	29,024	0.09		0	1	Q72, v234 = 3
Marital status: divorced/separated	29,024	0.12		0	1	Q72, v234 = 4;5
Children	29,024	0.73		0	1	Q77, v239_r > 0
Migration background: none	29,024	0.84		0	1	
Migration background: 1 st gen.	29,024	0.08		0	1	Q65, v227; Q68, v230; Q70, v232, recoded
Migration background: 2 nd gen.	29,024	0.07		0	1	
Left-right self-placement	29,024	5.4	2.2	1	10	Q31, v102
Unemployed	28,940	0.04		0	1	Q82, v244
Retired	28,940	0.29		0	1	Q82, v244

Note: ^a unless specified EVS (2019); only includes respondents used in the models; original non-rescaled values for welfare state measures in brackets.

Table A2: *Regression models of the relation between different welfare state programs and voluntary work*

DV: Voluntary work	Unemployment		Pension	
Replacement rate	0.152	(0.06)*	0.225	(0.06)**
Age	0.000	(0.00)	0.000	(0.00)
Gender (1: male)	-0.00	(0.01)	-0.00	(0.01)
	5		5	
Education	0.026	(0.00)***	0.026	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)*
Marital status: married/reg. partnership	0.009	(0.01)	0.009	(0.01)
Marital status: widowed	-0.00	(0.02)	-0.00	(0.02)
	3		3	
Marital status: divorced/separated	-0.00	(0.01)	-0.00	(0.01)
	4		4	
Children	0.032	(0.01)*	0.032	(0.01)*
Migration background: 1 st gen.	-0.01	(0.02)	-0.01	(0.02)
	8		8	
Migration background: 2 nd gen.	-0.09	(0.03)***	-0.09	(0.03)***
	3		3	
Left-right self-placement	-0.00	(0.00)*	-0.00	(0.00)*
	9		9	
Left-right self-placement ²	0.001	(0.00)+	0.001	(0.00)+
Constant	0.061	(0.03)+	0.064	(0.04)+
Respondents	26,524		26,524	
Countries	21		21	
ICC	0.035		0.026	

DV: Voluntary work	Unemployment		Pension	
Social expenditure	0.091	(0.05)+	0.142	(0.05)**
Age	-0.00	(0.00)	-0.00	(0.00)
	0		0	
Gender (1: male)	-0.00	(0.01)	-0.00	(0.01)
	4		4	
Education	0.025	(0.00)***	0.025	(0.00)***
Household income	0.004	(0.00)**	0.004	(0.00)**
Marital status: married/reg. partnership	0.009	(0.01)	0.009	(0.01)
Marital status: widowed	-0.00	(0.01)	0.000	(0.01)
	0			
Marital status: divorced/separated	-0.00	(0.01)	-0.00	(0.01)
	1		1	
Children	0.029	(0.01)*	0.029	(0.01)*
Migration background: 1 st gen.	-0.01	(0.02)	-0.01	(0.02)
	6		6	
Migration background: 2 nd gen.	-0.09	(0.02)***	-0.09	(0.02)***
	0		0	
Left-right self-placement	-0.01	(0.00)*	-0.01	(0.00)*
	0		0	
Left-right self-placement ²	0.001	(0.00)*	0.001	(0.00)*
Constant	0.114	(0.03)***	0.083	(0.03)**
Respondents	29,024		29,024	
Countries	23		23	

ICC

0.041

0.035

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Table A3: Regression models of the moderating effects of being unemployed and education on the relation between unemployment welfare and voluntary work

a) *Unemployment status*

DV: Voluntary work	Unemployment replacement rate		Unemployment expenditure	
Unemployment welfare	0.149	(0.07)*	0.096	(0.05)+
Unemployed	-0.067	(0.03)*	0.028	(0.03)
Unemployment welfare * Unemployed	0.069	(0.06)	-0.101	(0.08)
Age	-0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.004	(0.01)	-0.003	(0.01)
Education	0.026	(0.00)***	0.025	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)**
Marital status: married/reg. partnership	0.008	(0.01)	0.008	(0.01)
Marital status: widowed	-0.005	(0.02)	-0.002	(0.02)
Marital status: divorced/separated	-0.005	(0.01)	-0.002	(0.01)
Children	0.033	(0.01)*	0.030	(0.01)*
Migration background: 1 st gen.	-0.018	(0.02)	-0.015	(0.02)
Migration background: 2 nd gen.	-0.093	(0.03)***	-0.090	(0.02)***
Left-right self-placement	-0.009	(0.00)*	-0.010	(0.00)*
Left-right self-placement ²	0.001	(0.00)+	0.001	(0.00)*
Constant	0.066	(0.03)+	0.116	(0.03)***
Respondents	26,448		28,940	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

b) *Education*

DV: Voluntary work	Unemployment replacement rate		Unemployment expenditure	
Unemployment welfare	0.188	(0.06)**	0.146	(0.06)*
Education	0.031	(0.00)***	0.031	(0.00)***
Unemployment welfare * Education	-0.009	(0.00)+	-0.014	(0.01)+
Age	0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.004	(0.01)	-0.003	(0.01)
Household income	0.004	(0.00)*	0.004	(0.00)**
Marital status: married/reg. partnership	0.008	(0.01)	0.008	(0.01)
Marital status: widowed	-0.004	(0.02)	-0.000	(0.01)
Marital status: divorced/separated	-0.004	(0.01)	-0.002	(0.01)
Children	0.032	(0.01)*	0.029	(0.01)*
Migration background: 1 st gen.	-0.019	(0.02)	-0.016	(0.02)
Migration background: 2 nd gen.	-0.093	(0.03)***	-0.090	(0.02)***
Left-right self-placement	-0.009	(0.00)*	-0.010	(0.00)*
Left-right self-placement ²	0.001	(0.00)+	0.001	(0.00)*
Constant	0.038	(0.03)	0.093	(0.03)**
Respondents	26,524		29,024	

Countries	21	23
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Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Table A4: Regression models of the moderating effects of being retired and age on the relation between pension welfare and voluntary work

a) Retirement status

DV: Voluntary work	Pension replacement rate		Pension expenditure	
Pension welfare	0.196	(0.06)**	0.097	(0.05)*
Retired	-0.032	(0.02)	-0.069	(0.02)***
Pension welfare * Retired	0.103	(0.04)*	0.148	(0.03)***
Age	-0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.004	(0.01)	-0.004	(0.01)
Education	0.026	(0.00)***	0.026	(0.00)***
Household income	0.004	(0.00)**	0.004	(0.00)**
Marital status: married/reg. partnership	0.008	(0.01)	0.007	(0.01)
Marital status: widowed	-0.003	(0.02)	0.003	(0.01)
Marital status: divorced/separated	-0.005	(0.01)	-0.005	(0.01)
Children	0.034	(0.01)*	0.032	(0.01)*
Migration background: 1 st gen.	-0.018	(0.02)	-0.014	(0.02)
Migration background: 2 nd gen.	-0.092	(0.03)***	-0.088	(0.02)***
Left-right self-placement	-0.010	(0.00)*	-0.012	(0.00)**
Left-right self-placement ²	0.001	(0.00)*	0.001	(0.00)**
Constant	0.087	(0.04)*	0.118	(0.03)***
Respondents	26,448		28,940	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

b) Age

DV: Voluntary work	Pension replacement rate		Pension expenditure	
Pension welfare	0.090	(0.09)	-0.047	(0.05)
Age	-0.001	(0.00)+	-0.002	(0.00)***
Pension welfare * Age	0.003	(0.00)*	0.004	(0.00)***
Gender (1: male)	-0.005	(0.01)	-0.004	(0.01)
Education	0.026	(0.00)***	0.026	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)*
Marital status: married/reg. partnership	0.009	(0.01)	0.008	(0.01)
Marital status: widowed	-0.002	(0.02)	0.003	(0.02)
Marital status: divorced/separated	-0.006	(0.01)	-0.004	(0.01)
Children	0.033	(0.01)*	0.031	(0.01)*
Migration background: 1 st gen.	-0.017	(0.02)	-0.014	(0.02)
Migration background: 2 nd gen.	-0.092	(0.03)***	-0.088	(0.02)***
Left-right self-placement	-0.010	(0.00)*	-0.012	(0.00)**
Left-right self-placement ²	0.001	(0.00)*	0.001	(0.00)**
Constant	0.128	(0.05)**	0.189	(0.03)***

Respondents	26,524	28,540
Countries	21	23

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Table A5: Regression models of the moderating effect of being unemployed and education on the relation between unemployment/pension welfare and voluntary work

a) Unemployment status

DV: Voluntary work	Replacement rate		Expenditure	
Unemployment welfare	0.090	(0.06)	-0.071	(0.10)
Pension welfare	0.198	(0.06)**	0.196	(0.09)*
Unemployed	-0.055	(0.05)	0.051	(0.02)*
Unemployment welfare * Unemployed	0.076	(0.06)	0.030	(0.08)
<i>Pension welfare * Unemployed</i>	-0.037	(0.11)	-0.158	(0.05)***
Age	-0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.004	(0.01)	-0.003	(0.01)
Education	0.026	(0.00)***	0.025	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)**
Marital status: married/reg. partnership	0.008	(0.01)	0.008	(0.01)
Marital status: widowed	-0.005	(0.02)	-0.001	(0.02)
Marital status: divorced/separated	-0.005	(0.01)	-0.002	(0.01)
Children	0.033	(0.01)*	0.030	(0.01)*
Migration background: 1 st gen.	-0.018	(0.02)	-0.015	(0.02)
Migration background: 2 nd gen.	-0.093	(0.03)***	-0.090	(0.02)***
Left-right self-placement	-0.009	(0.00)*	-0.010	(0.00)*
Left-right self-placement ²	0.001	(0.00)+	0.001	(0.00)*
Constant	0.024	(0.03)	0.088	(0.03)**
Respondents	26,448		28,940	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

b) Education

DV: Voluntary work	Replacement rate		Expenditure	
Unemployment welfare	0.128	(0.05)*	0.023	(0.10)
Pension welfare	0.203	(0.07)**	0.141	(0.10)
Education	0.032	(0.00)***	0.029	(0.00)***
Unemployment welfare * Education	-0.009	(0.01)	-0.024	(0.01)**
<i>Pension welfare * Education</i>	-0.002	(0.01)	0.012	(0.01)*
Age	0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.004	(0.01)	-0.003	(0.01)
Household income	0.004	(0.00)*	0.004	(0.00)**
Marital status: married/reg. partnership	0.008	(0.01)	0.008	(0.01)
Marital status: widowed	-0.004	(0.02)	-0.000	(0.02)
Marital status: divorced/separated	-0.004	(0.01)	-0.001	(0.01)
Children	0.032	(0.01)*	0.029	(0.01)*
Migration background: 1 st gen.	-0.018	(0.02)	-0.016	(0.02)
Migration background: 2 nd gen.	-0.092	(0.03)***	-0.091	(0.02)***

Left-right self-placement	-0.009	(0.00)*	-0.010	(0.00)*
Left-right self-placement ²	0.001	(0.00) ⁺	0.001	(0.00)*
Constant	-0.006	(0.03)	0.076	(0.03)*
Respondents	26,524		29,024	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Table A6: Regression models of the moderating effect of being retired on the relation between unemployment/pension welfare and voluntary work

a) Retirement status

DV: Voluntary work	Replacement rate		Expenditure	
Pension welfare	0.168	(0.07)*	0.156	(0.10)
Unemployment welfare	0.091	(0.06)	-0.087	(0.10)
Retired	-0.033	(0.03)	-0.072	(0.02)***
Pension welfare * Retired	0.102	(0.04)*	0.120	(0.04)***
<i>Unemployment welfare * Retired</i>	<i>0.002</i>	<i>(0.05)</i>	<i>0.042</i>	<i>(0.04)</i>
Age	-0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.004	(0.01)	-0.004	(0.01)
Education	0.026	(0.00)***	0.026	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)**
Marital status: married/reg. partnership	0.008	(0.01)	0.007	(0.01)
Marital status: widowed	-0.004	(0.02)	0.003	(0.02)
Marital status: divorced/separated	-0.005	(0.01)	-0.005	(0.01)
Children	0.035	(0.01)**	0.031	(0.01)*
Migration background: 1 st gen.	-0.018	(0.02)	-0.014	(0.02)
Migration background: 2 nd gen.	-0.092	(0.03)***	-0.088	(0.02)***
Left-right self-placement	-0.010	(0.00)*	-0.012	(0.00)**
Left-right self-placement ²	0.001	(0.00)*	0.001	(0.00)**
Constant	0.042	(0.03)	0.124	(0.03)***
Respondents	26,448		28,940	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

b) Age

DV: Voluntary work	Pension replacement rate		Pension expenditure	
Pension welfare	0.068	(0.10)	0.035	(0.12)
Unemployment welfare	0.072	(0.08)	-0.122	(0.15)
Age	-0.001	(0.00)	-0.002	(0.00)***
Pension welfare * Age	0.003	(0.00)*	0.003	(0.00)*
<i>Unemployment welfare * Age</i>	<i>0.000</i>	<i>(0.00)</i>	<i>0.001</i>	<i>(0.00)</i>
Gender (1: male)	-0.005	(0.01)	-0.004	(0.01)
Education	0.026	(0.00)***	0.026	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)*
Marital status: married/reg. partnership	0.009	(0.01)	0.008	(0.01)
Marital status: widowed	-0.002	(0.02)	0.003	(0.02)

Marital status: divorced/separated	-0.006	(0.01)	-0.004	(0.01)
Children	0.033	(0.01)*	0.031	(0.01)*
Migration background: 1 st gen.	-0.017	(0.02)	-0.014	(0.02)
Migration background: 2 nd gen.	-0.092	(0.03)***	-0.089	(0.02)***
Left-right self-placement	-0.010	(0.00)*	-0.012	(0.00)**
Left-right self-placement ²	0.001	(0.00)*	0.001	(0.00)**
Constant	0.093	(0.05)+	0.197	(0.03)***
Respondents	26,524		28,540	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Table A7: Regression models of the relation between sickness welfare and voluntary work

a) Direct relationship of sickness welfare

DV: Voluntary work	Replacement rate		Expenditure	
Sickness welfare	0.107	(0.08)	0.210	(0.05)***
Age	0.000	(0.00)	-0.000	(0.00)
Gender (1: male)	-0.005	(0.01)	-0.004	(0.01)
Education	0.026	(0.00)***	0.025	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)**
Marital status: married/reg. partnership	0.009	(0.01)	0.009	(0.01)
Marital status: widowed	-0.003	(0.02)	0.000	(0.01)
Marital status: divorced/separated	-0.004	(0.01)	-0.001	(0.01)
Children	0.032	(0.01)*	0.029	(0.01)*
Migration background: 1 st gen.	-0.018	(0.02)	-0.016	(0.02)
Migration background: 2 nd gen.	-0.093	(0.03)***	-0.091	(0.02)***
Left-right self-placement	-0.009	(0.00)*	-0.010	(0.00)*
Left-right self-placement ²	0.001	(0.00)+	0.001	(0.00)*
Constant	0.081	(0.05)	0.050	(0.02)*
Respondents	26,524		29,024	
Countries	21		23	

Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

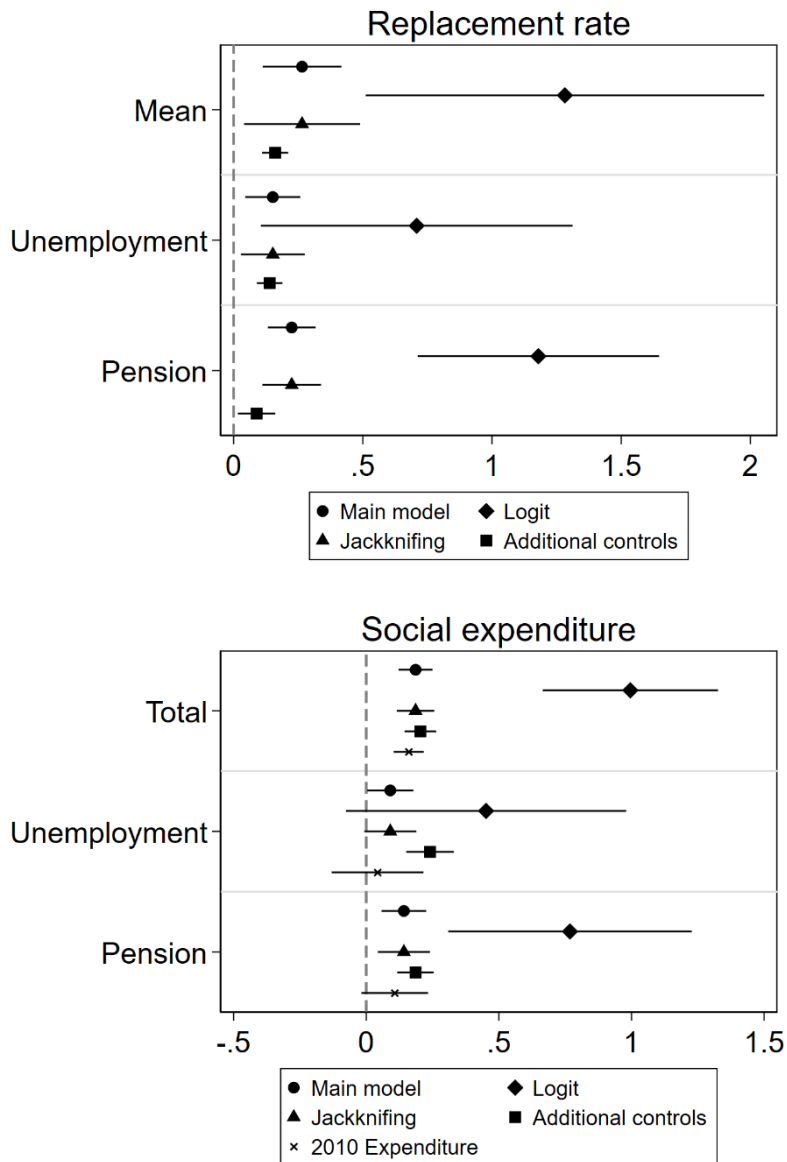
b) Interaction of sickness welfare with age

DV: Voluntary work	Replacement rate		Expenditure	
Sickness welfare	0.128	(0.08)	0.048	(0.06)
Age	0.000	(0.00)	-0.002	(0.00)**
Sickness welfare * Age	-0.000	(0.00)	0.003	(0.00)*
Gender (1: male)	-0.005	(0.01)	-0.004	(0.01)
Education	0.026	(0.00)***	0.025	(0.00)***
Household income	0.004	(0.00)*	0.004	(0.00)*
Marital status: married/reg. partnership	0.009	(0.01)	0.008	(0.01)
Marital status: widowed	-0.004	(0.02)	0.003	(0.01)
Marital status: divorced/separated	-0.004	(0.01)	-0.003	(0.01)
Children	0.032	(0.01)*	0.030	(0.01)*
Migration background: 1 st gen.	-0.019	(0.02)	-0.014	(0.02)
Migration background: 2 nd gen.	-0.093	(0.03)***	-0.088	(0.02)***

Left-right self-placement	-0.009	(0.00) ⁺	-0.011	(0.00) ^{**}
Left-right self-placement ²	0.001	(0.00) ⁺	0.001	(0.00) ^{**}
Constant	0.067	(0.06)	0.143	(0.04) ^{***}
Respondents	26,524		29,024	
Countries	21		23	

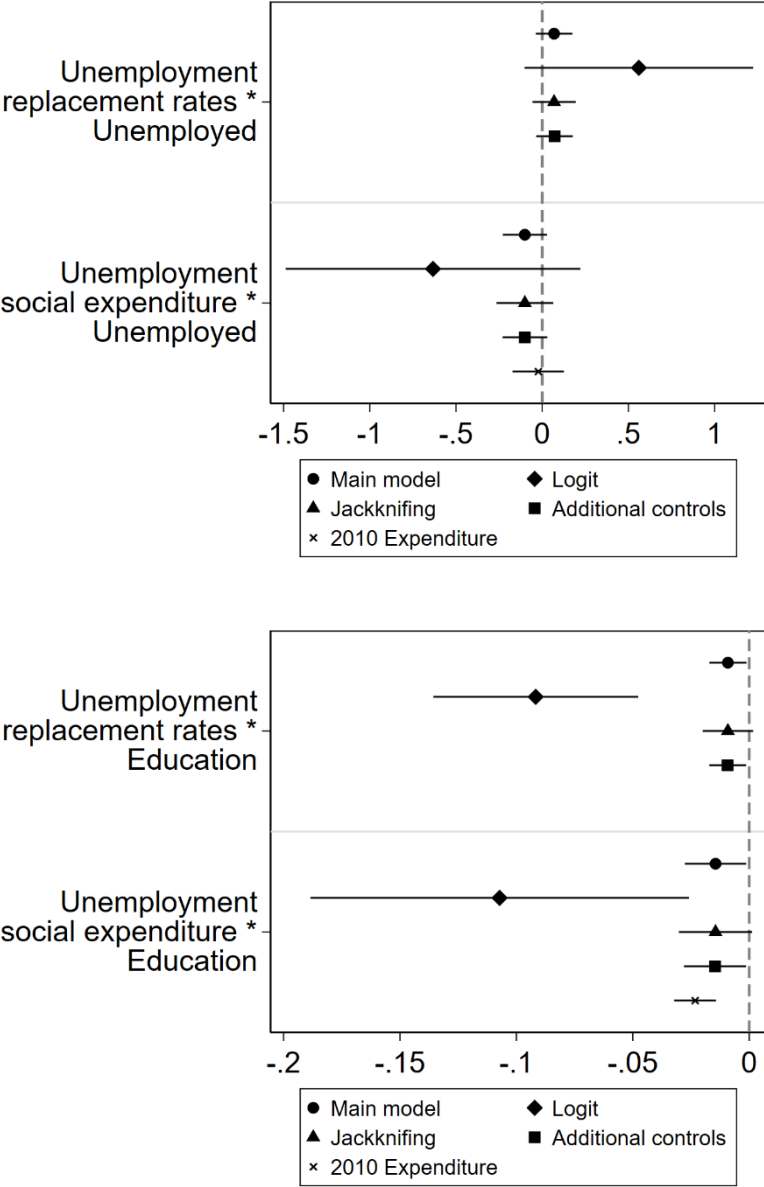
Note: Hierarchical linear probability regression coefficients with robust standard errors in parentheses, base categories: Sex: female, Marital status: single, Migration background: none; ⁺ p < 0.10, ^{*} p < 0.05, ^{**} p < 0.01, ^{***} p < 0.001. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Figure A1: Robustness checks for the direct relationships of the welfare state measures



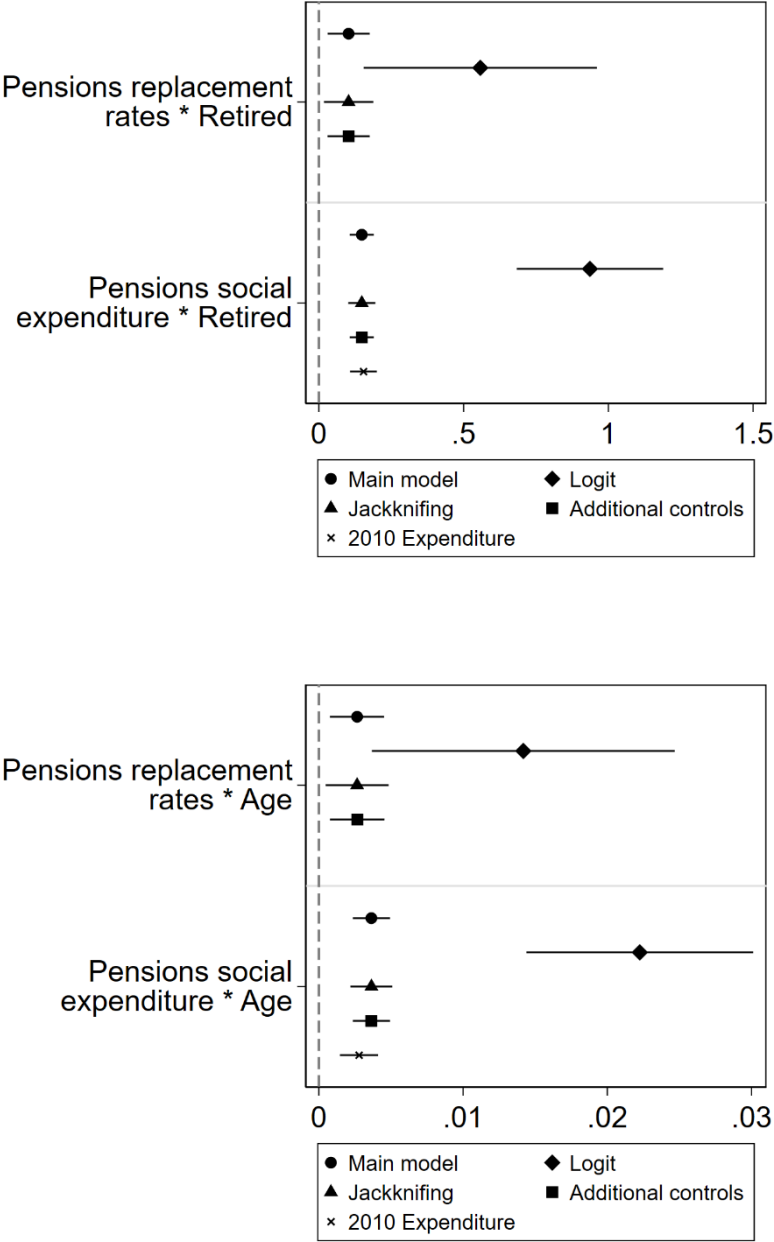
Note: Displayed are regression coefficients with 90% confidence intervals. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Figure A2: Robustness checks for the interaction effects of unemployed status and education with the unemployment benefits



Note: Displayed are regression coefficients with 90% confidence intervals. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017

Figure A3: Robustness checks for the interaction effects of retired status and age with pension benefits



Note: Displayed are regression coefficients with 90% confidence intervals. Data sources: Eurostat, 2021; EVS, 2020; Scruggs et al., 2017