

Poor versus rich countries: a gap in public attitudes towards fiscal solidarity in the EU

Sofia Vasilopoulou and Liisa Talving, *Department of Politics, University of York*

Online Appendices

Appendix A1. Descriptive statistics

	Mean	SD	Min	Max
Opposition to fiscal solidarity	0.47	0.50	0.0	1
Opposition to the EU	0.14	0.35	0.0	1
Economic evaluations	2.79	1.01	1.0	5
Occupation	4.88	2.14	1.0	8
Education	3.19	0.74	1.0	4
Attachment to the EU	2.82	0.94	1.0	4
Age	51.06	17.92	16.0	99
Gender	1.55	0.50	1.0	2
Social class	5.39	1.58	1.0	10
Left-right self-assessment	6.08	2.63	1.0	11
Approval of national government	1.40	0.49	1.0	2
Attitudes towards domestic redistribution	4.77	2.93	1.0	11
GDP per capita (2013)	95.74	34.66	46.0	261
Operating budgetary balance (2013)	1.28	1.84	-0.49	5.08
Bailout country	0.27	0.44	0.0	1
N=30,064				

Source: EES Voter Study 2014.

Appendix A2. Robustness test using payments from EU budget to measure domestic context (OBB)

		Model 1	Model 2
Individual-level variables	Economy a lot worse	0.55*** (0.07)	0.45*** (0.06)
	Economy a little worse	0.31*** (0.05)	0.25*** (0.04)
	Economy a little better	-0.18*** (0.05)	-0.20*** (0.04)
	Economy a lot better	-0.38*** (0.13)	-0.42*** (0.13)
	Self-employed	0.00 (0.08)	0.01 (0.08)
	Managers	-0.13* (0.08)	-0.13* (0.08)
	Other white collars	0.03 (0.07)	0.03 (0.07)
	Manual workers	0.14** (0.06)	0.14** (0.06)
	House person	0.18** (0.09)	0.19** (0.09)
	Retired	0.13* (0.07)	0.13* (0.07)
	Students	-0.01 (0.09)	0.00 (0.09)
	No full-time education	-0.20 (0.17)	-0.21 (0.17)
	Medium education	-0.17*** (0.05)	-0.16*** (0.05)
	High education	-0.43*** (0.05)	-0.42*** (0.05)
	Not really attached to Europe	-0.41*** (0.06)	-0.42*** (0.07)
	Somewhat attached to Europe	-0.92*** (0.06)	-1.03*** (0.07)
	Definitely attached to Europe	-1.35*** (0.06)	-1.51*** (0.07)
	Age	-0.00 (0.00)	-0.00 (0.00)
	Female	0.04 (0.03)	0.04 (0.03)
	Social class	-0.05*** (0.01)	-0.05*** (0.01)
	Left-right	0.07*** (0.02)	0.08*** (0.02)
	Left-right ²	-0.00* (0.00)	-0.00* (0.00)
	Approves government's record	-0.49*** (0.04)	-0.49*** (0.04)
	Preferences for domestic redistribution	0.00 (0.01)	0.00 (0.01)
Country-level variables	Operating budgetary balance logged	0.36*** (0.10)	0.07 (0.11)
	Bailout country	-0.05 (0.19)	-0.05 (0.18)
Cross-level interactions	Economy a lot worse # OBB	-0.19*** (0.07)	-

	Economy a little worse # OBB	-0.12** (0.05)	-
	Economy a little better # OBB	-0.02 (0.04)	-
	Economy a lot better # OBB	-0.26* (0.15)	-
	Not really attached to Europe # OBB	-	0.05 (0.07)
	Somewhat attached to Europe # OBB	-	0.27*** (0.07)
	Definitely attached to Europe # OBB	-	0.41*** (0.07)
Constant		0.76*** (0.17)	0.87*** (0.17)
Observations		19,795	19,795
Number of groups		28	28
Log likelihood		-11,964	-11,940

Source: EES Voter Study 2014.

Notes: Multilevel logistic regression models; respondents nested in countries. Entries are regression coefficients with standard errors in parentheses. Reference categories: economic situation in country stayed the same; unemployed; low education; not at all attached to Europe. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Appendix A3. Robustness tests using unemployment and GDP per capita change to measure domestic context

		Model 1	Model 2	Model 3	Model 4
Individual-level variables	Economy a lot worse	1.44*** (0.31)	0.45*** (0.06)	-4.92* (2.55)	0.45*** (0.06)
	Economy a little worse	0.77*** (0.22)	0.25*** (0.04)	-2.82 (2.03)	0.25*** (0.04)
	Economy a little better	-0.30 (0.22)	-0.20*** (0.04)	0.83 (2.12)	-0.20*** (0.04)
	Economy a lot better	1.50* (0.86)	-0.42*** (0.13)	-0.98 (7.91)	-0.41*** (0.13)
	Self-employed	0.01 (0.08)	0.00 (0.08)	0.01 (0.08)	0.00 (0.08)
	Managers	-0.13* (0.08)	-0.13* (0.08)	-0.13* (0.08)	-0.13* (0.08)
	Other white collars	0.03 (0.07)	0.03 (0.07)	0.03 (0.07)	0.03 (0.07)
	Manual workers	0.14** (0.06)	0.14** (0.06)	0.14** (0.06)	0.14** (0.06)
	House person	0.19** (0.09)	0.20** (0.09)	0.19** (0.09)	0.19** (0.09)
	Retired	0.13* (0.07)	0.12* (0.07)	0.13* (0.07)	0.13* (0.07)
	Students	-0.01 (0.09)	-0.01 (0.09)	-0.00 (0.09)	-0.01 (0.09)
	No full-time education	-0.20 (0.17)	-0.18 (0.17)	-0.20 (0.17)	-0.20 (0.17)
	Medium education	-0.17*** (0.05)	-0.17*** (0.05)	-0.17*** (0.05)	-0.17*** (0.05)
	High education	-0.43*** (0.05)	-0.43*** (0.05)	-0.43*** (0.05)	-0.43*** (0.05)
	Not really attached to Europe	-0.41*** (0.06)	-1.31*** (0.33)	-0.41*** (0.06)	5.71** (2.69)
	Somewhat attached to Europe	-0.92*** (0.06)	-2.69*** (0.31)	-0.92*** (0.06)	6.34** (2.53)
	Definitely attached to Europe	-1.35*** (0.06)	-3.81*** (0.34)	-1.35*** (0.06)	9.81*** (2.93)
	Age	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
	Female	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)
	Social class	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)
	Left-right	0.07*** (0.02)	0.08*** (0.02)	0.07*** (0.02)	0.07*** (0.02)
	Left-right ²	-0.00 (0.00)	-0.00* (0.00)	-0.00 (0.00)	-0.00* (0.00)
	Approves government's record	-0.49*** (0.04)	-0.48*** (0.04)	-0.49*** (0.04)	-0.49*** (0.04)
	Preferences for domestic redistribution	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Country-level variables	Unemployment rate	0.34 (0.25)	-0.43 (0.27)	-	-
	GDP per capita change	-	-	0.57 (1.08)	2.34** (1.16)
	Bailout country	0.05 (0.24)	0.08 (0.24)	0.26 (0.22)	0.27 (0.22)

Cross-level interactions	Economy a lot worse # unemployment	-0.40*** (0.12)	-	-	-
	Economy a little worse # unemployment	-0.22** (0.09)	-	-	-
	Economy a little better # unemployment	0.05 (0.10)	-	-	-
	Economy a lot better # unemployment	-0.92** (0.42)	-	-	-
	Not really attached to Europe # unemployment	-	0.36*** (0.13)	-	-
	Somewhat attached to Europe # unemployment	-	0.73*** (0.13)	-	-
	Definitely attached to Europe # unemployment	-	1.04*** (0.14)	-	-
	Economy a lot worse # GDP pc change	-	-	1.17** (0.56)	-
	Economy a little worse # GDP pc change	-	-	0.67 (0.44)	-
	Economy a little better # GDP pc change	-	-	-0.22 (0.46)	-
	Economy a lot better # GDP pc change	-	-	0.12 (1.71)	-
	Not really attached to Europe # GDP pc change	-	-	-	-1.34** (0.59)
	Somewhat attached to Europe # GDP pc change	-	-	-	-1.59*** (0.55)
	Definitely attached to Europe # GDP pc change	-	-	-	-2.43*** (0.64)
Constant		0.12 (0.58)	1.95*** (0.63)	-1.76 (5.01)	-9.86* (5.34)
Observations		19,795	19,795	19,795	19,795
Number of groups		28	28	28	28
Log likelihood		-11,965	-11,939	-11,972	-11,968

Source: EES Voter Study 2014.

Notes: Multilevel logistic regression models; respondents nested in countries. Entries are regression coefficients with standard errors in parentheses. Reference categories: economic situation in country stayed the same; unemployed; low education; not at all attached to Europe. *** p<0.01, ** p<0.05, * p<0.10

Appendix A4. Robustness test using an ordinal variable to measure attitudes towards fiscal solidarity (1 = totally disagree, 4 = totally agree)

		Model 1	Model 2	Model 3
Individual-level variables	Economy a lot worse	-0.51*** (0.05)	2.57*** (0.72)	-0.51*** (0.05)
	Economy a little worse	-0.20*** (0.04)	1.04** (0.49)	-0.20*** (0.04)
	Economy a little better	0.15*** (0.04)	0.14 (0.51)	0.15*** (0.04)
	Economy a lot better	0.56*** (0.10)	0.02 (1.75)	0.56*** (0.10)
	Self-employed	-0.01 (0.07)	-0.01 (0.07)	-0.01 (0.07)
	Managers	0.10 (0.06)	0.09 (0.06)	-0.09 (0.06)
	Other white collars	-0.07 (0.06)	-0.07 (0.06)	-0.07 (0.06)
	Manual workers	-0.13** (0.06)	-0.13** (0.06)	-0.12** (0.06)
	House person	-0.16** (0.08)	-0.16** (0.08)	-0.16** (0.08)
	Retired	-0.10 (0.06)	-0.10 (0.06)	-0.09 (0.06)
	Students	-0.02 (0.08)	-0.02 (0.08)	-0.03 (0.08)
	No full-time education	0.30** (0.15)	0.30** (0.15)	0.30** (0.15)
	Medium education	0.18*** (0.04)	0.17*** (0.04)	0.17*** (0.04)
	High education	0.42*** (0.05)	0.42*** (0.05)	0.41*** (0.05)
	Not really attached to Europe	0.56*** (0.05)	0.56*** (0.05)	0.17 (0.81)
	Somewhat attached to Europe	1.04*** (0.05)	1.03*** (0.05)	-2.20*** (0.74)
	Definitely attached to Europe	1.54*** (0.06)	1.54*** (0.06)	-3.18*** (0.77)
	Age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
	Female	-0.07** (0.03)	-0.06** (0.03)	-0.07** (0.03)
	Social class	0.05*** (0.01)	0.05*** (0.01)	0.05*** (0.01)
	Left-right	-0.07*** (0.02)	-0.07*** (0.02)	-0.07*** (0.02)
	Left-right ²	0.00 (0.00)	0.00 (0.00)	0.00* (0.00)
	Approves government's record	0.42*** (0.03)	0.42*** (0.03)	0.41*** (0.03)
	Preferences for domestic redistribution	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)
Country-level variables	GDP per capita logged	0.42* (0.24)	0.55** (0.24)	-0.26 (0.28)
	Bailout country	-0.09 (0.19)	-0.08 (0.18)	-0.09 (0.19)
Cross-level interactions	Economy a lot worse # GDP	- (0.16)	-0.70*** (0.16)	-

Economy a little worse # GDP	-	-0.27** (0.11)	-
Economy a little better # GDP	-	0.00 (0.11)	-
Economy a lot better # GDP	-	0.11 (0.38)	-
Not really attached to Europe # GDP	-	-	0.09 (0.18)
Somewhat attached to Europe # GDP	-	-	0.72*** (0.17)
Definitely attached to Europe # GDP	-	-	1.05*** (0.17)
Observations	19,795	19,795	19,795
Number of groups	28	28	28
Log likelihood	-23.554	-23.543	-23.517
Country-level variance	0.18*** (0.05)	0.17*** (0.05)	0.18*** (0.05)
Cut 1	1.47 (1.12)	2.06* (1.12)	-1.59 (1.31)
Cut 2	2.93*** (1.12)	3.52*** (1.12)	-0.13 (1.31)
Cut 3	5.36*** (1.12)	5.95*** (1.12)	2.31* (1.31)

Source: EES Voter Study 2014.

Notes: Multilevel ordered logit regression models; respondents nested in countries. Entries are regression coefficients with standard errors in parentheses. Reference categories: economic situation in country stayed the same; unemployed; low education; not at all attached to Europe. *** p<0.01, ** p<0.05, * p<0.10

Appendix A5. Robustness test using egocentric measures of the utilitarian dimension, i.e. education and occupation

		Model 1	Model 2
Individual-level variables	Economy a lot worse	0.44*** (0.06)	0.44*** (0.06)
	Economy a little worse	0.25*** (0.04)	0.25*** (0.04)
	Economy a little better	-0.19*** (0.04)	-0.20*** (0.04)
	Economy a lot better	-0.40*** (0.13)	-0.40*** (0.13)
	Self-employed	0.93 (1.16)	0.01 (0.08)
	Managers	1.14 (1.06)	-0.13* (0.08)
	Other white collars	-0.10 (1.03)	0.03 (0.07)
	Manual workers	0.54 (0.93)	0.14** (0.06)
	House person	-1.13 (1.29)	0.19** (0.09)
	Retired	-0.77 (0.88)	0.13* (0.07)
	Students	4.02*** (1.32)	-0.02 (0.09)
	No full-time education	-0.21 (0.17)	-1.67 (2.59)
	Medium education	-0.16*** (0.05)	1.14* (0.68)
	High education	-0.43*** (0.05)	2.62*** (0.71)
	Not really attached to Europe	-0.40*** (0.06)	-0.40*** (0.06)
	Somewhat attached to Europe	-0.92*** (0.06)	-0.92*** (0.06)
	Definitely attached to Europe	-1.35*** (0.06)	-1.34*** (0.06)
	Age	-0.00 (0.00)	-0.00 (0.00)
	Female	0.04 (0.03)	0.04 (0.03)
	Social class	-0.05*** (0.01)	-0.05*** (0.01)
	Left-right	0.07*** (0.02)	0.08*** (0.02)
	Left-right ²	-0.00 (0.00)	-0.00* (0.00)
	Approves government's record	-0.49*** (0.04)	-0.49*** (0.04)
	Preferences for domestic redistribution	0.00 (0.01)	0.00 (0.01)
Country-level variables	GDP per capita logged	-0.54* (0.30)	-0.17 (0.28)
	Bailout country	0.05 (0.20)	0.06 (0.19)
Cross-level interactions	Self-employed # GDP	-0.20 (0.26)	-

	Managers # GDP	-0.28 (0.23)	-
	Other white collars # GDP	0.03 (0.23)	-
	Manual workers # GDP	-0.09 (0.21)	-
	House person # GDP	0.29 (0.29)	-
	Retired # GDP	0.20 (0.20)	-
	Students # GDP	-0.90*** (0.29)	-
	No full-time education # GDP	-	0.31 (0.56)
	Medium education # GDP	-	-0.29* (0.15)
	High education # GDP	-	-0.67*** (0.16)
Constant		3.37** (1.38)	1.68 (1.28)
Observations		19,795	19,795
Number of groups		28	28
Log likelihood		-11,960	-11,962

Source: EES Voter Study 2014.

Notes: Multilevel logistic regression models; respondents nested in countries. Entries are regression coefficients with standard errors in parentheses. Reference categories: economic situation in country stayed the same; unemployed; low education; not at all attached to Europe. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Appendix A6. Robustness test using an alternative dependent variable, i.e. opposition to EU membership

		Model 1	Model 2
Individual-level variables	Economy a lot worse	-1.03 (1.10)	0.69*** (0.07)
	Economy a little worse	1.03 (0.90)	0.29*** (0.06)
	Economy a little better	1.40 (1.11)	-0.11 (0.07)
	Economy a lot better	5.56 (3.71)	0.28 (0.19)
	Self-employed	-0.10 (0.11)	-0.10 (0.11)
	Managers	-0.39*** (0.12)	-0.40*** (0.12)
	Other white collars	-0.25** (0.10)	-0.26** (0.10)
	Manual workers	-0.04 (0.09)	-0.04 (0.09)
	House person	-0.05 (0.12)	-0.05 (0.12)
	Retired	-0.05 (0.10)	-0.04 (0.10)
	Students	0.04 (0.14)	0.03 (0.14)
	No full-time education	-0.13 (0.22)	-0.13 (0.22)
	Medium education	-0.17** (0.07)	-0.18*** (0.07)
	High education	-0.35*** (0.08)	-0.35*** (0.08)
	Not really attached to Europe	-1.03*** (0.06)	-1.91* (0.99)
	Somewhat attached to Europe	-2.14*** (0.07)	-1.45 (1.01)
	Definitely attached to Europe	-2.77*** (0.09)	1.24 (1.24)
	Age	-0.00 (0.00)	-0.00 (0.00)
	Female	-0.12** (0.05)	-0.11** (0.05)
	Social class	-0.06*** (0.02)	-0.06*** (0.02)
	Left-right	-0.17*** (0.03)	-0.17*** (0.03)
	Left-right ²	0.01*** (0.00)	0.01*** (0.00)
	Approves government's record	-0.79*** (0.06)	-0.79*** (0.06)
	Preferences for domestic redistribution	0.00 (0.01)	0.00 (0.01)
Country-level variables	GDP per capita logged	0.98*** (0.28)	1.06*** (0.30)
	Bailout country	0.11 (0.20)	0.11 (0.20)
Cross-level interactions	Economy a lot worse # GDP	0.39 (0.25)	-

	Economy a little worse # GDP	-0.16 (0.20)	-
	Economy a little better # GDP	-0.33 (0.24)	-
	Economy a lot better # GDP	-1.13 (0.80)	-
	Not really attached to Europe # GDP	-	0.19 (0.22)
	Somewhat attached to Europe # GDP	-	-0.15 (0.22)
	Definitely attached to Europe # GDP	-	-0.88*** (0.27)
Constant		-3.60*** (1.30)	-3.93*** (1.38)
Observations		19,794	19,794
Number of groups		28	28
Log Likelihood		-6,332	-6,327

Source: EES Voter Study 2014.

Notes: Multilevel logistic regression model; respondents nested in countries. Entries are regression coefficients with standard errors in parentheses. Reference categories: economic situation in country stayed the same; unemployed; low education; not at all attached to Europe. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$