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

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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***	0.45***
marviduai-iever variables	Leonomy a for worse	(0.07)	(0.06)
	Economy a little worse	0.31***	0.25***
	Leonomy a nucle worse	(0.05)	(0.04)
	Economy a little better	-0.18***	-0.20***
	Decircing a natic sector	(0.05)	(0.04)
	Economy a lot better	-0.38***	-0.42***
	Zeonomy w lot could	(0.13)	(0.13)
	Self-employed	0.00	0.01
	I was	(0.08)	(0.08)
	Managers	-0.13*	-0.13*
		(0.08)	(0.08)
	Other white collars	0.03	0.03
		(0.07)	(0.07)
	Manual workers	0.14**	0.14**
		(0.06)	(0.06)
	House person	0.18**	0.19**
	Ţ.	(0.09)	(0.09)
	Retired	0.13*	0.13*
		(0.07)	(0.07)
	Students	-0.01	0.00
		(0.09)	(0.09)
	No full-time education	-0.20	-0.21
		(0.17)	(0.17)
	Medium education	-0.17***	-0.16***
		(0.05)	(0.05)
	High education	-0.43***	-0.42***
	8	(0.05)	(0.05)
	Not really attached to Europe	-0.41***	-0.42***
	, i	(0.06)	(0.07)
	Somewhat attached to Europe	-0.92***	-1.03***
	1	(0.06)	(0.07)
	Definitely attached to Europe	-1.35***	-1.51***
	ı	(0.06)	(0.07)
	Age	-0.00	-0.00
		(0.00)	(0.00)
	Female	0.04	0.04
		(0.03)	(0.03)
	Social class	-0.05***	-0.05***
		(0.01)	(0.01)
	Left-right	0.07***	0.08***
	-	(0.02)	(0.02)
	Left-right ²	-0.00*	-0.00*
		(0.00)	(0.00)
	Approves government's record	-0.49***	-0.49***
		(0.04)	(0.04)
	Preferences for domestic redistribution	0.00	0.00
		(0.01)	(0.01)
Country-level variables	Operating budgetary balance logged	0.36***	0.07
		(0.10)	(0.11)
	Bailout country	-0.05	-0.05
		(0.19)	(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***	0.87***
		(0.17)	(0.17)
Observations		19,795	19,795
Number of groups		28	28
Log likelihood		-11,964	-11,940

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

Individual-level variables Economy a lot worse 1.44***			Model 1	Model 2	Model 3	Model 4
Conomy a little worse			IVIOGEI I	iviouel 2	iviodel 3	Model 4
Economy a little worse 0.77*** 0.25*** -2.82 0.25*** 0.604 0.040	Individual-level variables	Economy a lot worse	1.44***	0.45***	-4.92*	0.45***
					(2.55)	(0.06)
Economy a little better		Economy a little worse				0.25***
Economy a lot better 1.50°			, ,		, ,	
Economy a lot better		Economy a little better		-0.20***	0.83	-0.20***
Self-employed						
Self-employed		Economy a lot better				
Managers						
Managers -0.13* -0.13* -0.13* -0.13* -0.13* Other white collars 0.03 0.03 0.03 0.03 Outher white collars 0.03 0.03 0.03 0.03 Manual workers 0.14** 0.14** 0.14** House person 0.19** 0.20** 0.19** 0.19** Retired 0.13* 0.12* 0.13* 0.13* Retired 0.13* 0.12* 0.13* 0.13* Outher with education 0.09* 0.09* 0.09* 0.09* No full-time education 0.17** 0.17* 0.17* 0.17* Medium education 0.17** 0.17* 0.17* 0.17* Medium education 0.17** 0.17** 0.17* 0.17* High education 0.17** 0.17** 0.17** 0.17* 0.17* High education 0.17** 0.17** 0.17* 0.17* 0.17* High education 0.18** 0.43*** 0.40*** 0.40** 0		Self-employed				
Other white collars			, ,			
Other white collars 0.03 0.03 0.03 0.07 Manual workers 0.14** 0.14** 0.14** 0.14** House person 0.19** 0.00* 0.00* 0.00* Retired 0.13** 0.12** 0.13** 0.09** 0.00** 0.00** 0.00*		Managers				
Manual workers						
Manual workers		Other white collars				
House person						
House person		Manual workers				
Retired					, ,	. ,
Retired		House person				
Students					, ,	
Students		Retired				
No full-time education			, ,		, ,	
No full-time education		Students				
Medium education						
Medium education		No full-time education				
High education						
High education		Medium education				
Not really attached to Europe			, ,		, ,	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		High education				
Somewhat attached to Europe						
Somewhat attached to Europe		Not really attached to Europe				
Definitely attached to Europe						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Somewhat attached to Europe				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			(0.06)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Definitely attached to Europe				
Female			, ,		, ,	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Age				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$, ,		, ,	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Female				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Social class				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Left-right				
$\begin{array}{c} \text{Approves government's record} \\ \text{Approves government's record} \\ \text{Preferences for domestic redistribution} \\ \text{Country-level variables} \\ \text{GDP per capita change} \\ \text{Bailout country} \\ \end{array} \begin{array}{c} (0.00) & (0.00) & (0.00) & (0.00) & (0.00) \\ -0.49^{***} & -0.48^{***} & -0.49^{***} & -0.49^{***} & -0.49^{***} \\ -0.049^{***} & -0.49^{***} & -0.49^{***} & -0.49^{***} & -0.49^{***} \\ (0.04) & (0.04) & (0.04) & (0.04) & (0.04) \\ (0.01) & (0.01) & (0.01) & (0.01) & (0.01) \\ (0.025) & (0.027) & & & & & & & \\ (0.25) & (0.27) & & & & & & \\ & & & & & & & \\ & & & & $		1 6 : 1.2				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Lett-right ²				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Approves government's record				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		B. C. C. L		\ /	` /	` /
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Preferences for domestic redistribution				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 . 1 . 1 . 1 . 1	II I			(0.01)	(0.01)
GDP per capita change 0.57 2.34** (1.08) (1.16) Bailout country 0.05 0.08 0.26 0.27	Country-level variables	Unemployment rate			-	-
(1.08) (1.16) Bailout country 0.05 0.08 0.26 0.27		CDD : 1	(0.25)		0.57	0.04
Bailout country 0.05 0.08 0.26 0.27		GDP per capita change	-	-		
		D. J.	0.05	0.00		
$(0.24) \qquad (0.24) \qquad (0.22) \qquad (0.22)$		Banout country				
			(0.24)	(0.24)	(0.22)	(0.22)

Cross-level interactions	Economy a lot worse # unemployment	-0.40***	-	-	-
	Economy a little worse # unemployment	(0.12) -0.22**	-	-	-
	Economy a little better # unemployment	(0.09) 0.05	-	-	-
	Economy a lot better # unemployment	(0.10) -0.92**	-	-	-
	N	(0.42)	O O Calculuda		
	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	-
	T			(0.46)	
	Economy a lot better # GDP pc change	-	-	0.12	-
	Not really attached to Europe # GDP pc	-	-	(1.71)	-1.34**
	change				
					(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	1.95***	-1.76	-9.86*
		(0.58)	(0.63)	(5.01)	(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

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***	2.57***	-0.51***
		(0.05)	(0.72)	(0.05)
	Economy a little worse	-0.20***	1.04**	-0.20***
		(0.04)	(0.49)	(0.04)
	Economy a little better	0.15***	0.14	0.15***
		(0.04)	(0.51)	(0.04)
	Economy a lot better	0.56***	0.02	0.56***
		(0.10)	(1.75)	(0.10)
	Self-employed	-0.01	-0.01	-0.01
		(0.07)	(0.07)	(0.07)
	Managers	0.10	0.09	-0.09
		(0.06)	(0.06)	(0.06)
	Other white collars	-0.07	-0.07	-0.07
	M 1 1	(0.06)	(0.06)	(0.06)
	Manual workers	-0.13**	-0.13**	-0.12**
	II	(0.06)	(0.06)	(0.06)
	House person	-0.16**	-0.16**	-0.16**
	Datinad	(0.08)	(0.08)	(0.08)
	Retired	-0.10 (0.06)	-0.10 (0.06)	-0.09 (0.06)
	Students	-0.02	-0.02	-0.03
	Students	(0.08)	(0.08)	(0.08)
	No full-time education	0.30**	0.30**	0.30**
	No full-time education	(0.15)	(0.15)	(0.15)
	Medium education	0.18***	0.17***	0.13)
	Wedfulli education	(0.04)	(0.04)	(0.04)
	High education	0.42***	0.42***	0.41***
	ingh education	(0.05)	(0.05)	(0.05)
	Not really attached to Europe	0.56***	0.56***	0.17
	Tree really accurated to Europe	(0.05)	(0.05)	(0.81)
	Somewhat attached to Europe	1.04***	1.03***	-2.20***
	2	(0.05)	(0.05)	(0.74)
	Definitely attached to Europe	1.54***	1.54***	-3.18***
		(0.06)	(0.06)	(0.77)
	Age	0.00	0.00	0.00
		(0.00)	(0.00)	(0.00)
	Female	-0.07**	-0.06**	-0.07**
		(0.03)	(0.03)	(0.03)
	Social class	0.05***	0.05***	0.05***
		(0.01)	(0.01)	(0.01)
	Left-right	-0.07***	-0.07***	-0.07***
	_	(0.02)	(0.02)	(0.02)
	Left-right ²	0.00	0.00	0.00*
		(0.00)	(0.00)	(0.00)
	Approves government's record	0.42***	0.42***	0.41***
		(0.03)	(0.03)	(0.03)
	Preferences for domestic redistribution	-0.01	-0.01	-0.00
		(0.01)	(0.01)	(0.01)
Country-level variables	GDP per capita logged	0.42*	0.55**	-0.26
	D. 11	(0.24)	(0.24)	(0.28)
	Bailout country	-0.09	-0.08	-0.09
	E	(0.19)	(0.18)	(0.19)
Cross-level interactions	Economy a lot worse # GDP	-	-0.70***	-
			(0.16)	

	Economy a little worse # GDP	-	-0.27**	-
	Economy a little better # GDP	-	(0.11) 0.00	-
	Economy a lot better # CDB		(0.11) 0.11	
	Economy a lot better # GDP	-	(0.38)	-
	Not really attached to Europe # GDP	-	-	0.09
	Somewhat attached to Europe # GDP	_	_	(0.18) 0.72***
	Some water and to Europe in GE1			(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***	0.17***	0.18***
		(0.05)	(0.05)	(0.05)
Cut 1		1.47	2.06*	-1.59
		(1.12)	(1.12)	(1.31)
Cut 2		2.93***	3.52***	-0.13
		(1.12)	(1.12)	(1.31)
Cut 3		5.36***	5.95***	2.31*
		(1.12)	(1.12)	(1.31)

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***	0.44***
	•	(0.06)	(0.06)
	Economy a little worse	0.25***	0.25***
		(0.04)	(0.04)
	Economy a little better	-0.19***	-0.20***
		(0.04)	(0.04)
	Economy a lot better	-0.40***	-0.40***
		(0.13)	(0.13)
	Self-employed	0.93	0.01
		(1.16)	(0.08)
	Managers	1.14	-0.13*
		(1.06)	(0.08)
	Other white collars	-0.10	0.03
		(1.03)	(0.07)
	Manual workers	0.54	0.14**
	***	(0.93)	(0.06)
	House person	-1.13	0.19**
	D .: 1	(1.29)	(0.09)
	Retired	-0.77	0.13*
	Cturdomto	(0.88) 4.02***	(0.07)
	Students		-0.02
	No full-time education	(1.32) -0.21	(0.09)
	No full-time education		-1.67
	Medium education	(0.17) -0.16***	(2.59) 1.14*
	Medium education	(0.05)	(0.68)
	High education	-0.43***	2.62***
	riigh caacation	(0.05)	(0.71)
	Not really attached to Europe	-0.40***	-0.40***
	That really accuence to Europe	(0.06)	(0.06)
	Somewhat attached to Europe	-0.92***	-0.92***
	Some what attached to Europe	(0.06)	(0.06)
	Definitely attached to Europe	-1.35***	-1.34***
	· · · · · · · · · · · · · · · · · · ·	(0.06)	(0.06)
	Age	-0.00	-0.00
	C	(0.00)	(0.00)
	Female	0.04	0.04
		(0.03)	(0.03)
	Social class	-0.05***	-0.05***
		(0.01)	(0.01)
	Left-right	0.07***	0.08***
		(0.02)	(0.02)
	Left-right ²	-0.00	-0.00*
		(0.00)	(0.00)
	Approves government's record	-0.49***	-0.49***
		(0.04)	(0.04)
	Preferences for domestic redistribution	0.00	0.00
	GDD	(0.01)	(0.01)
Country-level variables	GDP per capita logged	-0.54*	-0.17
	D. J.	(0.30)	(0.28)
	Bailout country	0.05	0.06
Correctional in the state of th	C-1f1 # CDD	(0.20)	(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***
Constant			(0.16)
		3.37**	1.68
		(1.38)	(1.28)
Observations		19,795	19,795
Number of groups		28	28
Log likelihood		-11,960	-11,962

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	0.69***
	•	(1.10)	(0.07)
	Economy a little worse	1.03	0.29***
	•	(0.90)	(0.06)
	Economy a little better	1.40	-0.11
		(1.11)	(0.07)
	Economy a lot better	5.56	0.28
		(3.71)	(0.19)
	Self-employed	-0.10	-0.10
		(0.11)	(0.11)
	Managers	-0.39***	-0.40***
		(0.12)	(0.12)
	Other white collars	-0.25**	-0.26**
	N	(0.10)	(0.10)
	Manual workers	-0.04	-0.04
	11	(0.09)	(0.09)
	House person	-0.05	-0.05
	D-4:4	(0.12)	(0.12)
	Retired	-0.05	-0.04
	Students	(0.10) 0.04	(0.10) 0.03
	Students	(0.14)	
	No full-time education	-0.13	(0.14) -0.13
	No full-time education	(0.22)	(0.22)
	Medium education	-0.17**	-0.18***
	Wediam education	(0.07)	(0.07)
	High education	-0.35***	-0.35***
	riigh education	(0.08)	(0.08)
	Not really attached to Europe	-1.03***	-1.91*
	The really accused to Europe	(0.06)	(0.99)
	Somewhat attached to Europe	-2.14***	-1.45
	The state of the s	(0.07)	(1.01)
	Definitely attached to Europe	-2.77***	1.24
	•	(0.09)	(1.24)
	Age	-0.00	-0.00
	-	(0.00)	(0.00)
	Female	-0.12**	-0.11**
		(0.05)	(0.05)
	Social class	-0.06***	-0.06***
		(0.02)	(0.02)
	Left-right	-0.17***	-0.17***
	2	(0.03)	(0.03)
	Left-right ²	0.01***	0.01***
		(0.00)	(0.00)
	Approves government's record	-0.79***	-0.79***
	Durfamore for the district of	(0.06)	(0.06)
	Preferences for domestic redistribution	0.00	0.00
Country lavel verichles	CDP per cepite legged	(0.01) 0.98***	(0.01)
Country-level variables	GDP per capita logged		1.06***
	Bailout country	(0.28) 0.11	(0.30)
	Danout Country	(0.20)	0.11 (0.20)
Cross-level interactions	Economy a lot worse # GDP	0.20)	(0.20)
C1055-10 VOI IIICI aCHOIIS	Leonomy a for worse π ODI	(0.25)	-
		(0.23)	

	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***	-3.93***
		(1.30)	(1.38)
Observations		19,794	19,794
Number of groups		28	28
Log Likelihood		-6,332	-6,327

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