

## Online Appendix

Torcal, M., and Christmann, P. (Forthcoming) ‘Congruence, National Context and Trust in European Institutions’, *Journal of European Public Policy*.

### Aggregate-Level Panel Analysis (Eurobarometer)

#### *Context-Level Variables*

**Budget Deficit:** General government net lending/borrowing, calculated as revenue minus total expenditure and expressed as a percentage of GDP. This indicator is used to approximate the government budget deficit and its consequences for the economy’s fiscal stance. Measured on a yearly basis. Source: IMF WEO Database (2017).

**Economic Performance Index (EPI):** Own estimation. Measured on a monthly basis. The EPI combines information on unemployment, government deficit, inflation and GDP growth into a single composite index. It thus attempts to capture the economy’s monetary status, its production stance, the fiscal stance and its aggregate performance. The index is constructed as follows:

$$\text{Weighted EPI} = 100\% - W_{Inf} \times (|Inf(\%) - I^*|) - W_{Unem} \times (Unem(\%) - U^*) - W_{Def} \times \left( \frac{Def}{GDP(\%)} - \frac{Def}{GDP^*} \right) + W_{GDP} \times (\Delta GDP(\%) - \Delta GDP^*),$$

where  $I^*$  is the desired inflation rate (0%),  $U^*$  is the desired unemployment rate (4.75%),  $(Def/GDP^*)$  is the desired government deficit as a share of GDP (0%) and  $\Delta GDP^*$  is the desired change in GDP (4.75%). The weights ( $W$ ) are generated by estimating the inverse standard deviation for each economic variable multiplied by the average standard deviation of all the variables. For a detailed description of the construction of the index, see Khramov and Lee (2013: 6f.).

**EU operating budgetary balances:** The operating budgetary balances (OBB) reflect the difference between what a Member State receives from and pays into the EU budget. It is estimated on the basis of Member State contributions to the EU budget and on the allocation of EU expenditure. Negative values indicate that a country has paid more towards the EU’s budget than it should if there were a balance between the share of payments and the share of receipts between the EU and the Member State, while positive amounts mean that it has received more money from the EU budget than it has paid into the EU budget. Administrative expenditures are excluded from the calculation of the expenditure. Therefore, it only takes into account operating expenditure. On the revenue side, the OBB only takes into account so-called adjusted ‘national contributions.’ The index is constructed as follows:

$$OBB_i = TAE_i - H5_i - TNC_i \times \frac{TAE_{EU} - H5_{EU}}{TNC_{EU}},$$

where  $OB B_i$  is the operating budgetary balance of Member State  $i$ ,  $TAE_i$  is its total allocated expenditure,  $H5_i$  is the administrative expenditure allocated to the Member State and  $TNC_i$  is the total national contribution of Member State  $i$ .  $TAE_{EU}$  is the total allocated expenditure for the EU as a whole,  $H5_{EU}$  is the administrative expenditure for the EU as a whole and  $TNC_{EU}$  is the total of national contributions for the EU as a whole. Measured on a yearly basis. Source: European Commission (2017).

**GDP growth rate:** Gross domestic product, total, percentage change. GDP measures the value of goods and services produced by a state minus its imports. Measured on a quarterly basis. Annual change rate. Source: OECD Stat (2017).

**Government Performance (Public):** Weighted quarterly average values of the responses to the following question: “On the whole, how would you evaluate the working of the government: (100) very good, (75) good, (50) fair, (25) bad or (0) very bad?” Measured on a quarterly basis. The data come from the monthly opinion barometer of the CIS (2017).

**Inflation Rate:** Total growth rate compared to the same period in the previous year. The inflation rate is measured using the consumer price index and reflects the annual percentage change in the cost of an average consumer basket. Measured on a quarterly basis. Source: OECD Stat (2017).

**Perception of Corruption (Public):** The percentage of respondents who answer that “corruption and fraud” are among the “three principal problems that currently exist in Spain.” Weighted quarterly averages. Although the data coverage has been very good after the early 2000s (i.e. 11 out of 12 months are usually covered), this is not true for the 1990s and the beginning of the 2000s. For this reason, we have chosen to partially impute missing data with a linear interpolation. Following this procedure, we replace missing values for the following time points: quarter 2 in 1999, quarter 4 in 2000, and quarter 2 in 2001. Excluding the imputed values from the analysis does not substantially affect the results of our models. The data come from the monthly opinion barometer of the CIS (2017).

**European election (year):** Measures whether a survey was conducted during a year in which a European election took place (1), or otherwise (0).

**Unemployment rate:** Total percentage of the labour force. Unemployment refers to people aged 15 and over who were without work during the reference week but available for work and actively seeking work during the previous four weeks including the reference week. Measured on a quarterly basis. Source: OECD Stat (2017).

*Eurobarometer: Question Wording and Variable Coding*

**Age:** in years.

**Education:** (1) finished at age 15 or below, (2) finished at age 16-19, and (4) still studying. Reference category = (3) finished at age 20 or older.

**Male:** gender of respondent, reference category = female.

**Marital status:** (1) married, re-married or cohabitating, reference category = (0) single, separated, widowed or divorced.

**Unemployed:** (1) unemployed, reference category = (0) employed, student, retired or other.

**Urban residency:** (0) less than 10,000 inhabitants; (1) more than 10,000 inhabitants.

**Political discussion:** “When you get together with friends, would you say you discuss political matters frequently, occasionally or never?” (0) never; (1) occasionally; (2) frequently.

**Support for the Euro/Monetary Union:** “What is your opinion on each of the following statements? Please tell me for each statement whether you are for it or against it. A European Monetary Union with one single currency, the Euro” (0) against; (1) for.

**Trust in the EU parliament:** “For each of the following European bodies, please tell me if you tend to trust it or tend not to trust it. The European Parliament” (0) tend not to trust; (1) tend to trust.

**Trust in the EU commission:** “For each of the following European bodies, please tell me if you tend to trust it or tend not to trust it. The European Commission” (0) tend not to trust; (1) tend to trust. (0) (1)

**Trust in parliament:** “I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it? The Spanish parliament” (0) tend not to trust; (1) tend to trust.

**Trust in government:** “I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it? The Spanish government.” (0) tend not to trust; (1) tend to trust.

**Trust in representative institutions of the EU:** Takes on the value (1) if trust in the EU parliament *and* trust in the EU commission = 1, otherwise (0).

**Trust in representative institutions (Spain):** Takes on the value (1) if trust in parliament and trust in the government = 1, otherwise (0).

*Figures and Tables*

**Table A. Eurobarometer Surveys.**

<b>Eurobarometer Number</b>	<b>Year</b>	<b>Quarter</b>	<b>Month</b>
51	1999	2	April
54.1	2000	4	December
55.1*	2001	2	April
56.2	2001	4	November
57.1	2002	2	April
59.1	2003	2	April
60.1	2003	4	October
61	2004	1	March
62	2004	4	December
63.4	2005	2	May
64.2	2005	4	October
65.2	2006	2	April
66.1	2006	3	September
67.2	2007	2	April
68.1	2007	4	October
69.2	2008	2	April
70.1	2008	4	October
73.4	2010	2	May
74.2	2010	4	November
75.3	2011	2	May
76.3	2011	4	November
77.3	2012	2	May
78.1	2012	4	November
79.3	2013	2	May
81.2	2014	1	March
81.4	2014	2	June
82.3	2014	4	November
83.3	2015	2	May
84.3	2015	4	November

*Notes:* \*No information for trust in the European Commission available.

**Table B. Descriptive Statistics (Representative Institutions of the EU).**

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>	<b>N</b>
<b>Respondent-Level</b>					
Age	45.18	17.92	15	99	18,862
<i>Education</i>					
finished at age 15 or below	0.36	0.48	0	1	18,862
finished at age 16–19	0.32	0.47	0	1	18,862
finished at age 20 or older	0.23	0.42	0	1	18,862
still studying	0.09	0.29	0	1	18,862
Male	0.50	0.50	0	1	18,862
Married/cohabitating	0.61	0.49	0	1	18,862
<i>Political Discussion</i>					
Never	0.37	0.48	0	1	18,862
occasionally	0.47	0.50	0	1	18,862
frequently	0.17	0.37	0	1	18,862
Support Euro/Monetary Union	0.73	0.44	0	1	18,862
Trust in rep. Institutions (Spain)	0.29	0.45	0	1	18,862
Trust in Representative Institutions of EU	0.52	0.50	0	1	18,862
Unemployed	0.14	0.34	0	1	18,862
Urban residency	0.79	0.41	0	1	18,862
<b>Context-Level</b>					
Economic Performance Index (EPI)	79.91	9.46	58.98	92.17	28
Inflation Rate	2.42	1.43	-0.50	4.60	28
Unemployment Rate	15.85	6.70	7.97	26.27	28
Growth Rate	1.89	2.36	-3.10	4.60	28
Budget Deficit	-3.42	4.41	-10.47	2.12	28
Perception of corruption	11.35	17.26	0.47	55.37	28
EU operating budgetary balances	4861.58	2478.96	1090.6	8859.4	28
European election	0.21	0.42	0	1	28

**Table C. Probit Multilevel Model of Trust in the EU Parliament – Eurobarometer**

	Trust in EU Parliament											
	Null 4		Model 7		Model 8		Model 9		Model 10		Model 11	
	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)
<i>Respondent-Level Coefficients</i>												
Age			0.05***	(0.01)	0.05***	(0.01)	0.05***	(0.01)	0.05***	(0.01)	0.05***	(0.01)
Male (ref.: female)			-0.05**	(0.02)	-0.05**	(0.02)	-0.05**	(0.02)	-0.05**	(0.02)	-0.06**	(0.02)
Education (ref.: more than 19)												
up to 15			-0.14***	(0.03)	-0.14***	(0.03)	-0.14***	(0.03)	-0.14***	(0.03)	-0.14***	(0.03)
16-19			-0.04	(0.03)	-0.04	(0.03)	-0.04	(0.03)	-0.04	(0.03)	-0.04	(0.03)
Still studying			0.08+	(0.04)	0.08+	(0.04)	0.08+	(0.04)	0.08+	(0.04)	0.08+	(0.04)
Married/ cohabitating			0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)
Urban residency (ref.: rural)			0.00	(0.03)	0.00	(0.03)	0.00	(0.03)	0.00	(0.03)	0.00	(0.03)
Unemployed			-0.09**	(0.03)	-0.08**	(0.03)	-0.08**	(0.03)	-0.08**	(0.03)	-0.08**	(0.03)
Political discussion (ref.: never)												
occasionally			0.15***	(0.02)	0.15***	(0.02)	0.15***	(0.02)	0.15***	(0.02)	0.15***	(0.02)
frequently			0.09**	(0.03)	0.09**	(0.03)	0.09**	(0.03)	0.09**	(0.03)	0.09**	(0.03)
Support for Euro/ Monetary Union			0.87***	(0.02)	0.87***	(0.02)	0.87***	(0.02)	0.87***	(0.02)	0.87***	(0.02)
Trust in parliament			1.22***	(0.02)	1.25***	(0.05)	1.26***	(0.04)	1.26***	(0.04)	1.27***	(0.04)
<i>Longitudinal Coefficients</i>												
Economic Performance Index			0.18***	(0.04)	0.15***	(0.04)	0.22***	(0.05)	0.15***	(0.04)	0.21***	(0.04)
Perception of corruption			-0.29***	(0.05)	-0.27***	(0.05)	-0.28***	(0.05)	-0.32***	(0.05)	-0.31***	(0.05)
EU operating budgetary balances			0.02	(0.05)	0.00	(0.05)	0.00	(0.05)	0.00	(0.05)	0.00	(0.05)
European election (year)			0.01	(0.10)	0.02	(0.09)	0.01	(0.09)	0.01	(0.09)	0.01	(0.09)
<i>Cross-Level Interactions</i>												
Trust in parliament*EPI							-0.14***	(0.04)			-0.12**	(0.04)
Trust in parliament*corruption									0.11*	(0.04)	0.08+	(0.04)
Constant	0.22*	(0.11)	-0.83***	(0.06)	-0.82***	(0.06)	-0.82***	(0.06)	-0.82***	(0.06)	-0.82***	(0.06)
<i>Variance components</i>												
Quarter-level residual	0.33***	(0.09)	0.04***	(0.01)	0.05***	(0.02)	0.04***	(0.01)	0.04***	(0.01)	0.04***	(0.01)
Random slope: trust in parliament					0.04*	(0.02)	0.02*	(0.01)	0.03*	(0.01)	0.02+	(0.01)
Log Likelihood	-12,370.97		-9,840.02		-9,824.84		-9,819.73		-9,822.32		-9,818.14	
AIC	24,745.93		19,716.05		19,689.67		19,681.47		19,686.65		19,680.28	
ICC quarter-level	0.25		0.03		0.04		0.04		0.04		0.04	
Number of respondents	20,938		20,938		20,938		20,938		20,938		20,938	
Number of quarters (surveys)	29		29		29		29		29		29	

Notes: Probit multilevel regression; standardized  $\beta$  (except gender, education, employment status, civil status, political discussion, support for Euro, trust in government and European election); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1. AIC: Covariances between intercepts and slopes are estimated, but not reported. Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

**Table D. Probit Multilevel Model of Trust in the EU Commission – Eurobarometer**

	Trust in EU Commission											
	Null 5		Model 12		Model 13		Model 14		Model 15		Model 16	
	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)
<i>Respondent-Level Coefficients</i>												
Age			0.05***	(0.01)	0.05***	(0.01)	0.05***	(0.01)	0.05***	(0.01)	0.05***	(0.01)
Male (ref.: female)			-0.06**	(0.02)	-0.06**	(0.02)	-0.06**	(0.02)	-0.06**	(0.02)	-0.06**	(0.02)
Education (ref.: more than 19)												
up to 15			-0.20***	(0.03)	-0.19***	(0.03)	-0.19***	(0.03)	-0.19***	(0.03)	-0.19***	(0.03)
16-19			-0.08**	(0.03)	-0.08**	(0.03)	-0.08**	(0.03)	-0.08**	(0.03)	-0.08**	(0.03)
Still studying			0.04	(0.04)	0.04	(0.04)	0.04	(0.04)	0.04	(0.04)	0.04	(0.04)
Married/ cohabitating			0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)
Urban residency (ref.: rural)			-0.05*	(0.03)	-0.05*	(0.03)	-0.05*	(0.03)	-0.05*	(0.03)	-0.05*	(0.03)
Unemployed			-0.08*	(0.03)	-0.07*	(0.03)	-0.07*	(0.03)	-0.07*	(0.03)	-0.07*	(0.03)
Political discussion (ref.: never)												
occasionally			0.16***	(0.02)	0.16***	(0.02)	0.16***	(0.02)	0.16***	(0.02)	0.16***	(0.02)
frequently			0.10**	(0.03)	0.10**	(0.03)	0.10**	(0.03)	0.10**	(0.03)	0.10**	(0.03)
Support for Euro/ Monetary Union			0.87***	(0.02)	0.87***	(0.02)	0.87***	(0.02)	0.87***	(0.02)	0.87***	(0.02)
Trust in government			1.04***	(0.02)	1.07***	(0.05)	1.08***	(0.04)	1.08***	(0.04)	1.09***	(0.04)
<i>Longitudinal Coefficients</i>												
Economic Performance Index (EPI)			0.19***	(0.04)	0.17***	(0.04)	0.23***	(0.05)	0.17***	(0.04)	0.22***	(0.05)
Perception of corruption			-0.30***	(0.05)	-0.27***	(0.05)	-0.27***	(0.05)	-0.34***	(0.05)	-0.33***	(0.05)
EU Operating budgetary balances			-0.02	(0.05)	-0.05	(0.05)	-0.05	(0.05)	-0.05	(0.05)	-0.05	(0.05)
European election (year)			-0.03	(0.09)	0.04	(0.10)	-0.05	(0.10)	-0.05	(0.10)	-0.05	(0.10)
<i>Cross-Level Interactions</i>												
Trust in government*EPI							-0.10*	(0.04)			-0.08*	(0.04)
Trust in government*corruption									0.13**	(0.04)	0.11**	(0.04)
Constant	0.14	(0.10)	-0.78***	(0.06)	-0.77***	(0.06)	-0.77***	(0.06)	-0.77***	(0.06)	-0.77***	(0.06)
<i>Variance components</i>												
Quarter-level residual variance	0.29***	(0.08)	0.03***	(0.01)	0.05**	(0.02)	0.04**	(0.01)	0.04**	(0.01)	0.04**	(0.01)
Random slope: trust in government					0.04**	(0.01)	0.03*	(0.01)	0.03*	(0.01)	0.02*	(0.01)
Log Likelihood	-11,893.15		-9,828.13		-9,810.38		-9,807.63		-9,806.63		-9,804.70	
AIC	23,790.31		19,692.26		19,660.75		19,657.27		19,655.25		19,653.40	
ICC quarter-level	0.23		0.03		0.05		0.04		0.04		0.04	
Number of respondents	19,607		19,607		19,607		19,607		19,607		19,607	
Number of quarters (surveys)	28		28		28		28		28		28	

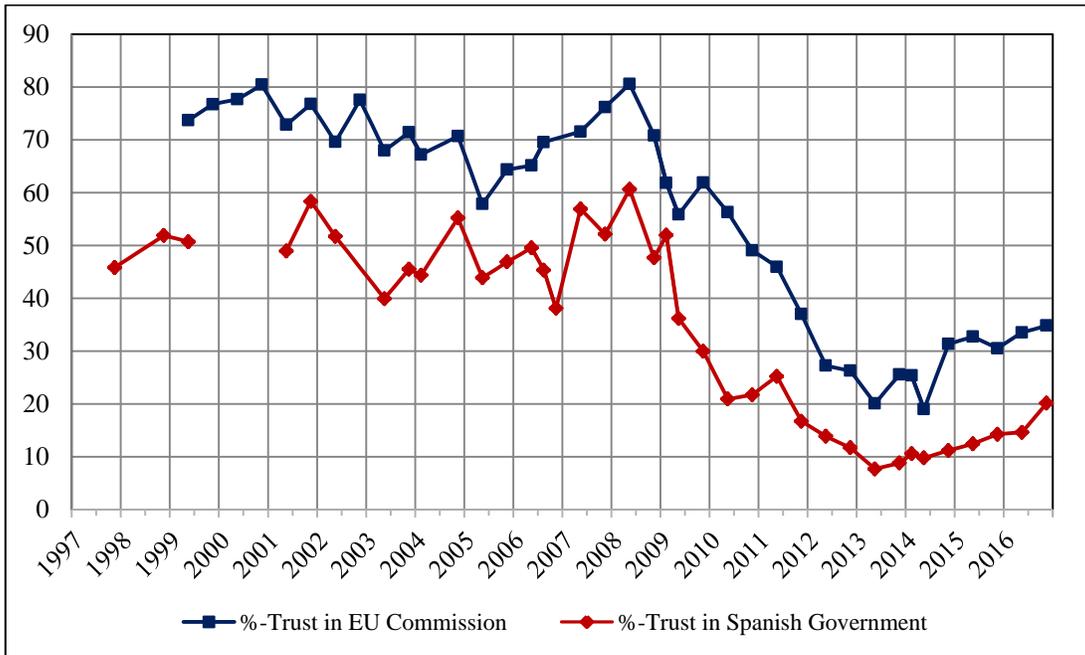
Notes: Probit multilevel regression; standardized  $\beta$  (except gender, education, employment status, civil status, political discussion, support for Euro, trust in government and European election); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1. Covariances between intercepts and slopes are estimated, but not reported. AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

**Table E. Probit Multilevel Model of Trust in Representative Institutions of the EU with Lagged Predictors - Eurobarometer**

Trust in Representative Institutions of the EU (Parliament and Commission) with Lagged Predictors												
	Null 6		Model 17		Model 18		Model 19		Model 20		Model 21	
	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)
<i>Respondent-Level Coefficients</i>												
Age			0.06***	(0.01)	0.06***	(0.01)	0.06***	(0.01)	0.06***	(0.01)	0.06***	(0.01)
Male (ref.: female)			-0.05*	(0.02)	-0.05*	(0.02)	-0.05*	(0.02)	-0.05*	(0.02)	-0.05*	(0.02)
Education (ref.: more than 19)												
up to 15			-0.16***	(0.03)	-0.16***	(0.03)	-0.16***	(0.03)	-0.16***	(0.03)	-0.16***	(0.03)
16-19			-0.07*	(0.03)	-0.07*	(0.03)	-0.07*	(0.03)	-0.07*	(0.03)	-0.07*	(0.03)
Still studying			0.04	(0.05)	0.04	(0.05)	0.04	(0.05)	0.04	(0.05)	0.04	(0.05)
Married/ cohabitating			0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)	0.02	(0.02)
Urban residency (ref.: rural)			-0.05*	(0.03)	-0.05*	(0.03)	-0.05*	(0.03)	-0.05*	(0.03)	-0.05*	(0.03)
Unemployed			-0.09**	(0.03)	-0.09**	(0.03)	-0.09**	(0.03)	-0.09*	(0.03)	-0.09**	(0.03)
Political discussion (ref.: never)												
occasionally			0.14***	(0.02)	0.14***	(0.02)	0.14***	(0.02)	0.14***	(0.02)	0.14***	(0.02)
frequently			0.09**	(0.03)	0.09**	(0.03)	0.09**	(0.03)	0.09**	(0.03)	0.09**	(0.03)
Support for Euro/ Monetary Union			0.89***	(0.03)	0.89***	(0.03)	0.89***	(0.03)	0.89***	(0.03)	0.89***	(0.03)
Trust in rep. institutions (Spain)			1.17***	(0.03)	1.23***	(0.06)	1.25***	(0.05)	1.25***	(0.05)	1.26***	(0.04)
<i>Longitudinal Coefficients</i>												
Economic Performance Index (lag)			0.19***	(0.04)	0.16***	(0.04)	0.23***	(0.04)	0.17***	(0.04)	0.22***	(0.04)
Perception of corruption (lag)			-0.29***	(0.04)	-0.27***	(0.04)	-0.27***	(0.04)	-0.33***	(0.05)	-0.32***	(0.04)
EU operating budgetary balances (lag)			-0.00	(0.04)	-0.02	(0.04)	-0.02	(0.04)	-0.02	(0.04)	-0.03	(0.04)
European election (lag)			-0.04	(0.10)	-0.04	(0.10)	-0.04	(0.09)	-0.04	(0.10)	-0.04	(0.09)
<i>Cross-Level Interactions</i>												
Trust in rep. institutions (Spain)*EPI							-0.17***	(0.05)			-0.13**	(0.05)
Trust in rep. institutions (Spain)*corruption									0.18***	(0.05)	0.14**	(0.05)
Constant	0.09	(0.11)	-0.84***	(0.06)	-0.83***	(0.06)	-0.83***	(0.06)	-0.84***	(0.06)	-0.84***	(0.06)
<i>Variance components</i>												
Quarter-level residual	0.31***	(0.08)	0.03***	(0.01)	0.04**	(0.01)	0.03**	(0.01)	0.03**	(0.01)	0.03**	(0.01)
Random slope: trust in parliament					0.07**	(0.03)	0.04*	(0.02)	0.04*	(0.02)	0.03*	(0.01)
Log Likelihood	-11392.72		-9315.1		-9291.722		-9286.748		-9286.937		-9283.426	
AIC	22789.45		18666.2		18623.44		18615.5		18615.87		18610.8	
ICC quarter-level	0.24		0.03		0.04		0.03		0.03		0.03	
Number of respondents	18,862		18,862		18,862		18,862		18,862		18,862	
Number of quarters (surveys)	28		28		28		28		28		28	

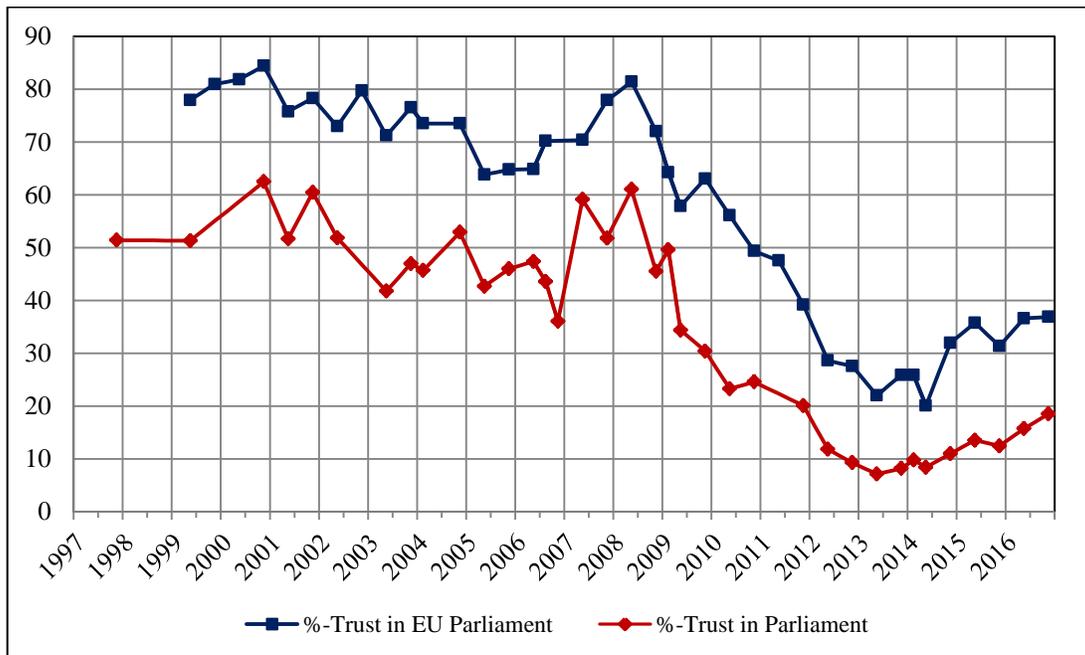
Notes: Probit multilevel regression with lagged predictors (3 month lag); standardized  $\beta$  (except gender, education, employment status, civil status, political discussion, support for Euro, trust in government and European election); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1. AIC: Covariances between intercepts and slopes are estimated, but not reported. Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

**Figure A. Political Trust in Government – Eurobarometer**



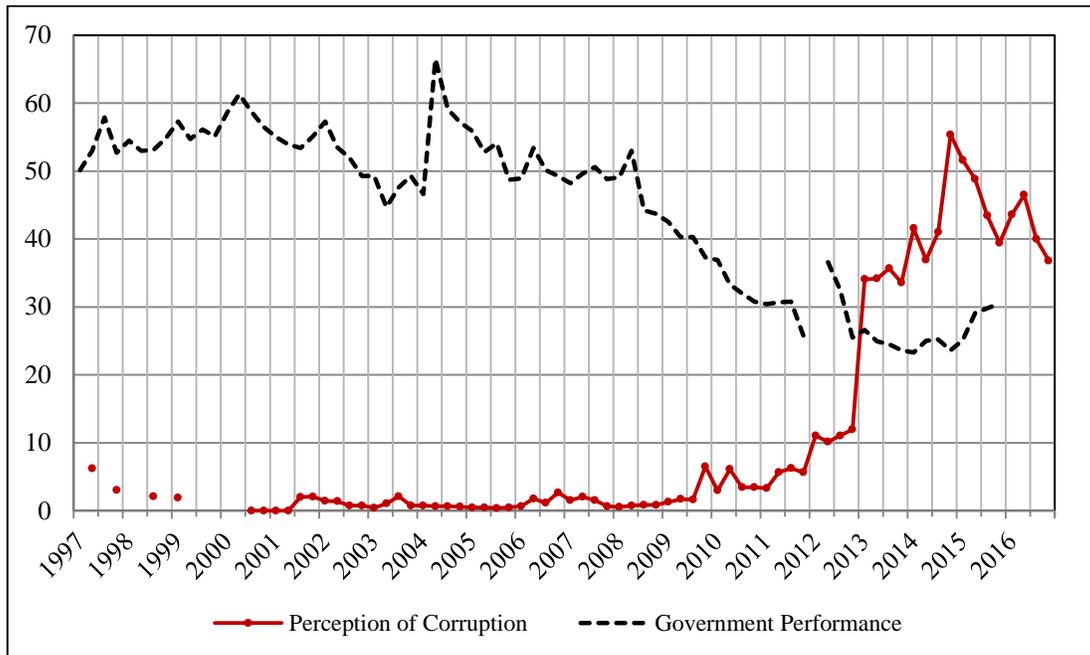
*Notes:* Measured on a quarterly basis. Weighted percentages. The values for political trust are interpolated (line); dots show the observed values. *Source:* Eurobarometer.

**Figure B. Political Trust in Parliament – Eurobarometer**



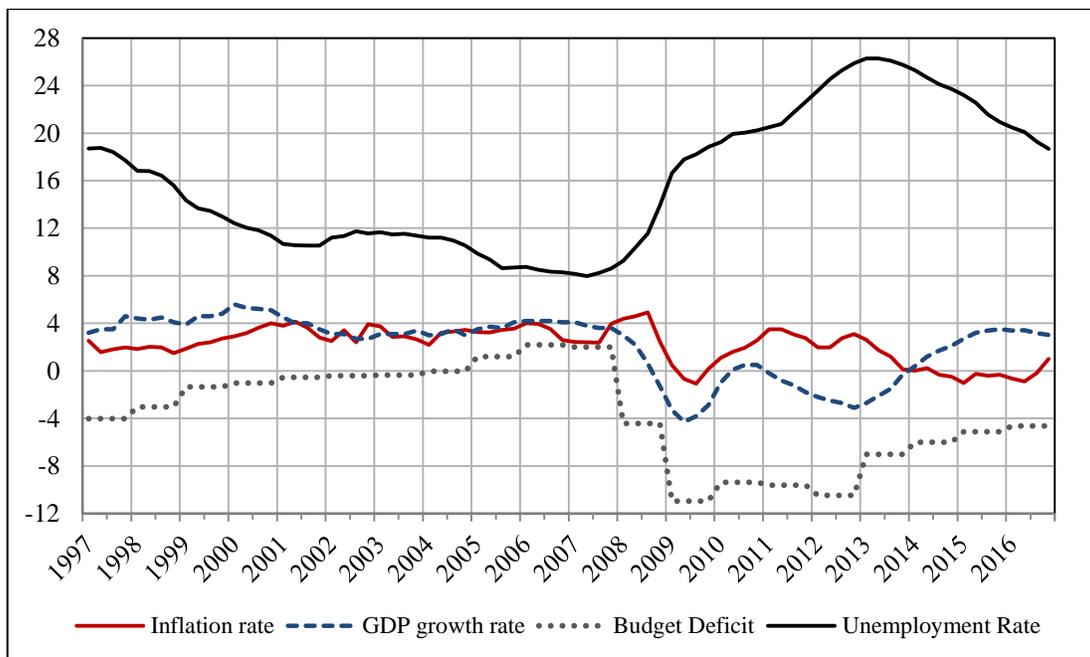
*Notes:* Measured on a quarterly basis. Weighted percentages. The values for political trust are interpolated (line); dots show the observed values. *Source:* Eurobarometer.

**Figure C. Salience of Political Corruption and Public Evaluations of Government Performance in Spain**



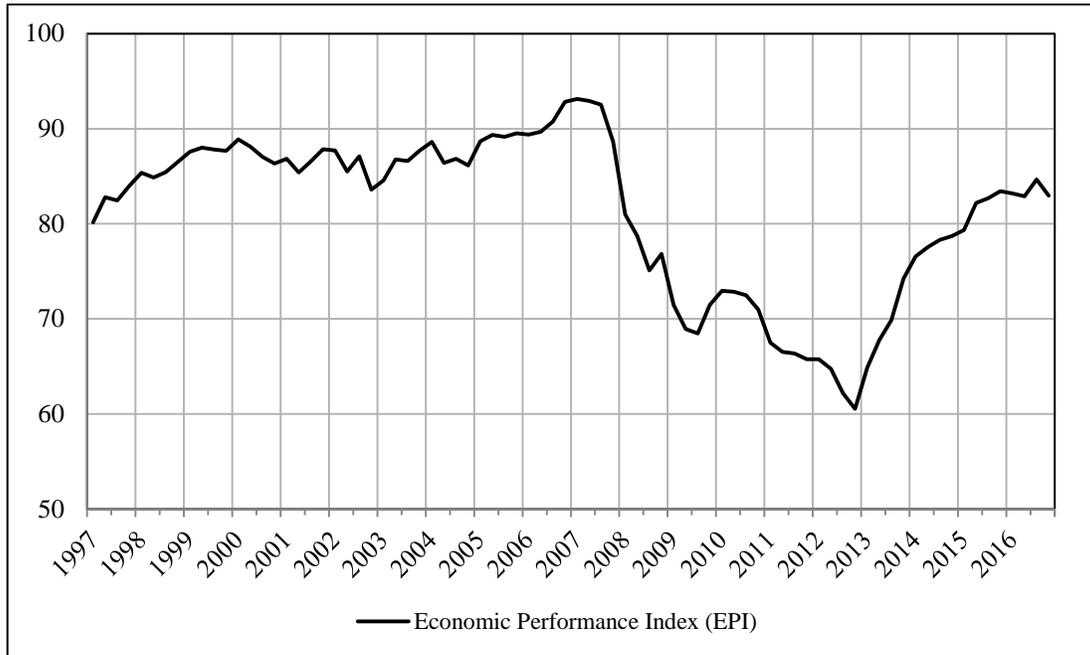
Notes: Quarterly averages. Source: Centro de Investigaciones Sociológicas (2017).

**Figure D. Economic Performance in Spain**



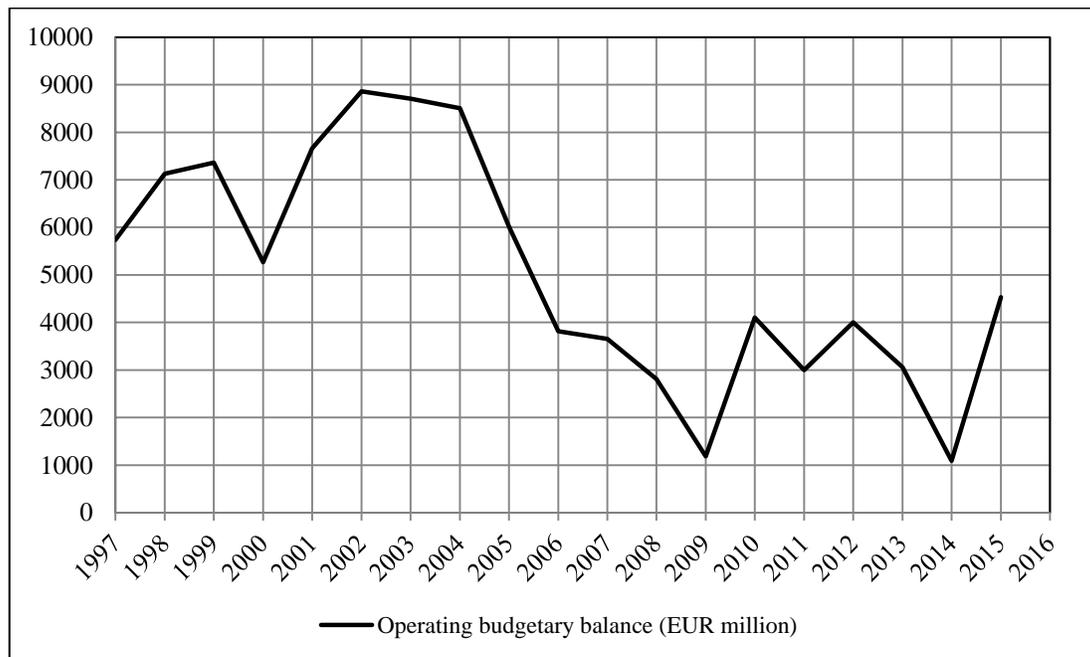
Notes: Measured on a quarterly or yearly basis. Sources: OECD Stat (2017), IMF WEO Database (2017).

**Figure E. Economic Performance Index**



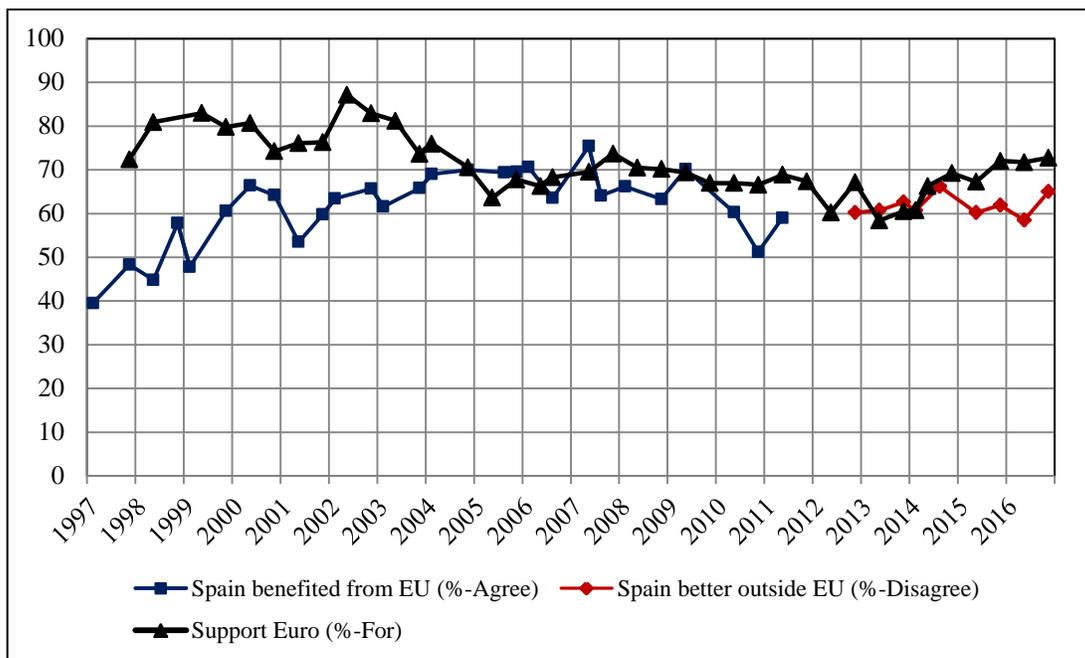
*Notes:* Measured on a quarterly basis. *Sources:* Own elaboration based on data from OECD Stat (2017), IMF WEO Database (2017).

**Figure F. Net Benefits from the European Union**

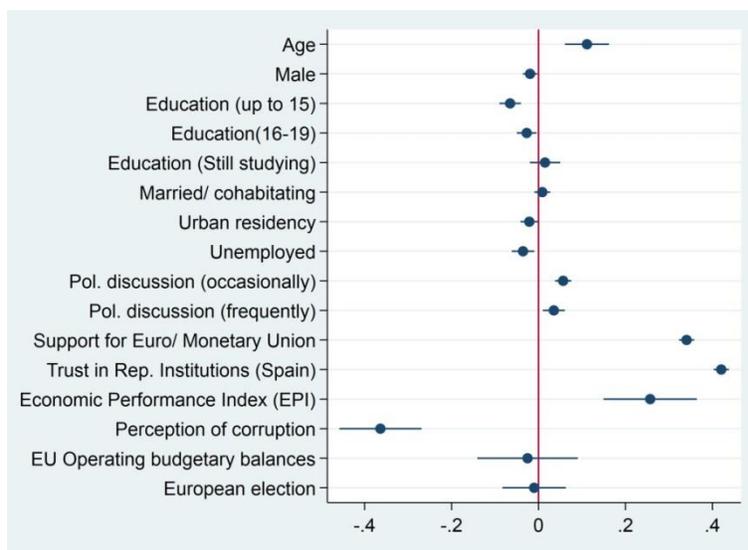


*Notes:* Measured on a yearly basis. *Sources:* European Commission (2017).

**Figure G. EU Performance Evaluations**

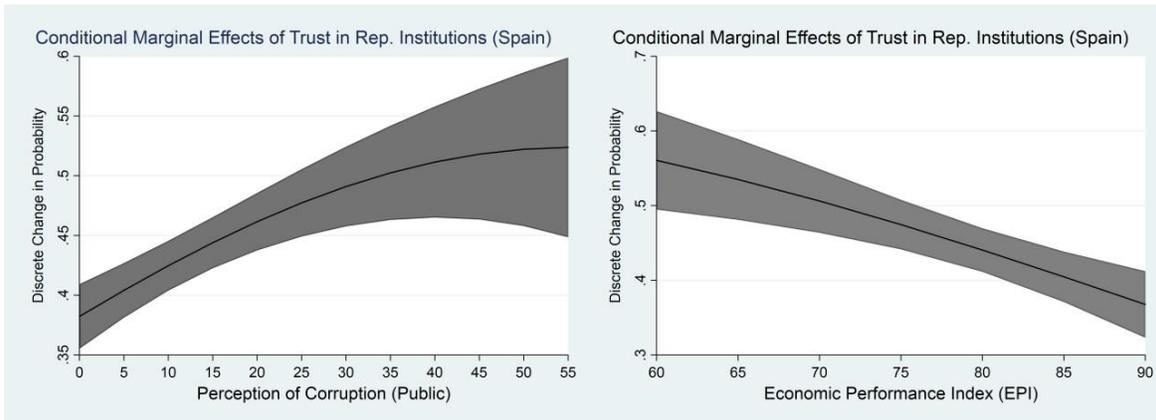


**Figure H. Predicted Change in Probabilities -Eurobarometer**



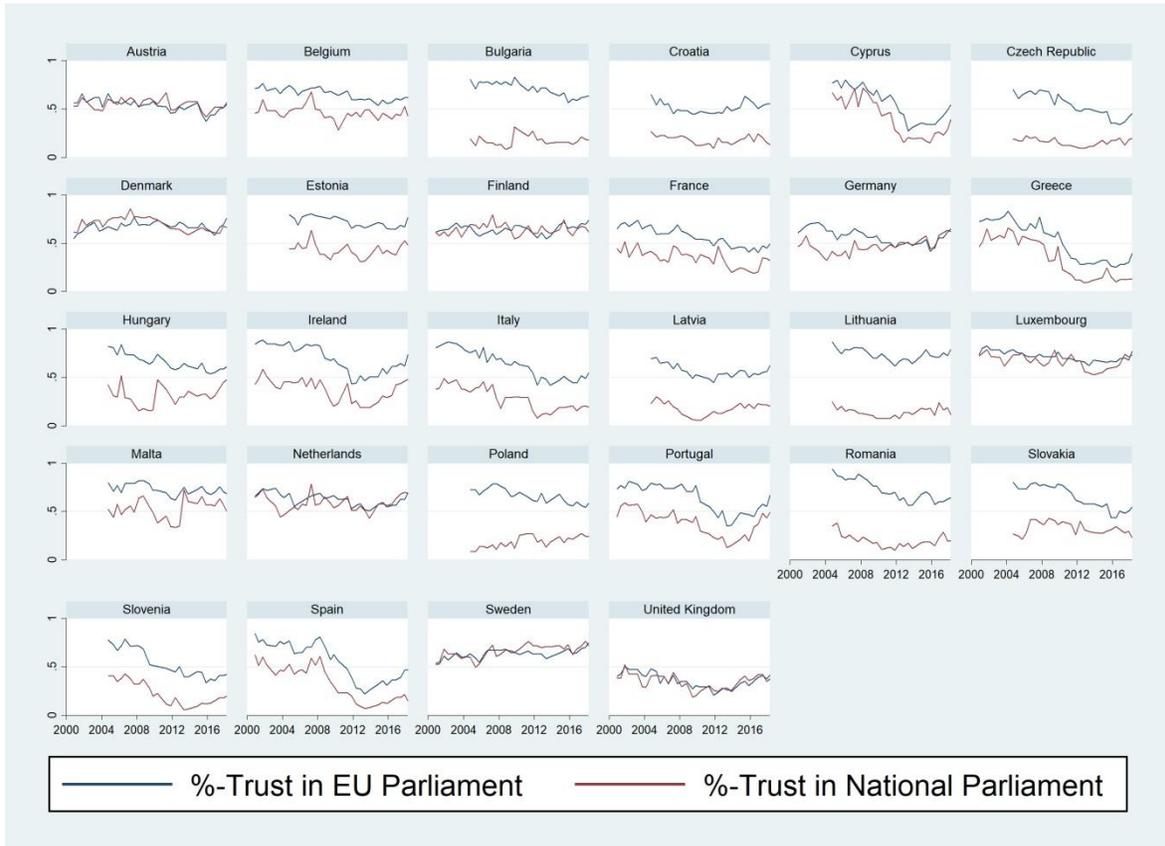
*Notes:* Predicted change in probabilities of trusting over not trusting in the EP over the range of explanatory variables (maximum-minimum). Predictions are based on Model 1. For the predictions all other variables are held at their means. Lines represent 95%-CI.

**Figure I. Marginal Effects Plots of Cross-Level Interactions – Eurobarometer**



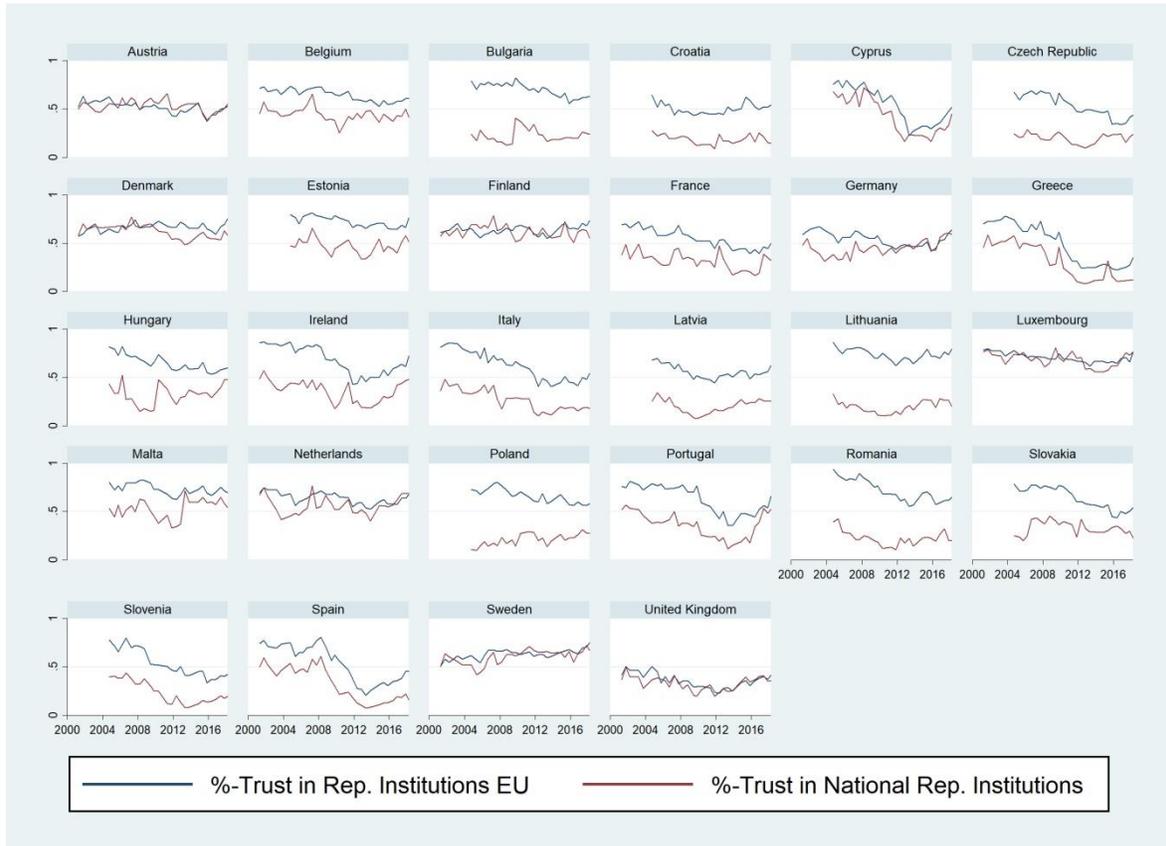
*Notes:* To allow for a more meaningful interpretation, the marginal effects have been calculated based on unstandardized coefficients, holding all other variables at their means. Based on Model 5.

**Figure J. Time Trends of Trust in the European Parliament and National Parliaments, 2001 to 2018**



Source: Eurobarometer standard trends provided by the European Commission (2018).

**Figure K. Time Trends of Trust in the European Commission and National Governments, 2001 to 2018**



Source: Eurobarometer standard trends provided by the European Commission (2018).

## Individual-Level Panel Analysis (CIUPANEL)

### *CIUPANEL: Question Wording and Variable Coding*

**Age:** The age of the respondent in years.

**Education level:** (1) Lower than primary; (2) Primary education (until 12 years of age); (3) First Lower secondary (until 12 years of age); (4) Second Lower secondary; (5) Upper secondary; (6) Tertiary education.

**Economic situation in Spain index:** An index was created based on factor scores obtained in response to the following questions: (A) “How has the general economic situation changed in Spain over the last twelve months?” (5) It has improved a lot (4) It has improved a little (3) It is the same (2) It has got a little worse (1) It has got a lot worse (B) “How do you think the general economic situation in Spain will be in 12 months?” (5) Much better; (4) A bit better; (3) Will stay about the same; (2) A bit worse; (1) Much worse.

**Evaluation of the performance of the government:** “Do you approve or not approve of the work of the Spanish government to date?” (1) Approve; (0) Do not approve.

**Male:** gender of the respondent, reference category = woman.

**Ideology:** “When people talk about politics, they talk about ‘left’ and ‘right.’ Could you tell us where you would position yourself on a scale of 0 to 10 in which 0 means left and 10 means right? You can use any number between 0 and 10 to express your opinion.”

**Index of personal economic situation:** An index was created based on factor scores obtained in response to the following questions: (A) “Currently to what extent are you worried, if you are worried, about paying the household bills?” (B) “Currently, to what extent are you worried, if you are worried, about having to reduce your standard of living?” (C) “Currently, to what extent are you worried, if you are worried, about having work?” (D) “Currently, to what extent are you worried, if you are worried, about having to repay a bank loan or make mortgage repayments?” (4) Very worried; (3) Quite worried; (2) Not very worried; (1) Not at all worried.

**Social trust index:** An index was created based on factor scores obtained in response to the following questions: (A) “Would you say that, in general, you can trust the majority of people, or that it is not wise when dealing with others? (0) It is not wise; (10) You can trust the majority of people (B) “Do you believe that the majority of people would try to take advantage of you if they could, or that they would be honest with you?” (0) The majority of people would try to take advantage of me; (10) The majority of people would be honest with me (C) “Would you say that the majority of the time people try to help others or do they principally look out for themselves?” (0) The majority of the time people look out for themselves; (10) the majority of the time people try to help other people.

**Interest in politics:** “Could you tell me to what extent you are interested in politics?” (4) Very much interested; (3) quite interested (2) a little interested (1) not interested.

**EU knowledge:** Self-report of knowledge of the EU: “And to what extent do you consider yourself informed regarding issues relating to the European Union?” (4) very informed; (3) quite informed; (2) a little informed; (1) not informed.

**Evaluation of the performance of the EU:** “Do you approve (1) or disapprove (0) of the decisions taken recently by the European Union?”

**Trust in parliament:** “On a scale from 0 to 10, how much do you trust the Spanish parliament?” (0) absolutely do not trust; (10) full trust.

**Trust in the EU parliament:** “On a scale from 0 to 10, how much do you trust the European parliament?” (0) absolutely do not trust; (10) full trust.

**Trust in the government:** “On a scale from 0 to 10, how much do you trust the Spanish government?” (0) absolutely do not trust; (10) full trust.

**Trust in the EU commission:** “On a scale from 0 to 10, how much do you trust the European Commission?” (0) absolutely do not trust; (10) full trust.

**Trust in representative institutions of the EU:** Average index of trust in the EU parliament and trust in the EU commission.

**Trust in representative institutions (Spain):** Average index of trust in parliament and trust in government.

**Table F. Descriptive Statistics.**

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>	<b>N</b>
<b>Dependent Variables</b>					
Trust in European Commission (wave 2)	3.65	2.37	0	10	2,639
Trust in European Commission (wave 3)	4.07	2.23	0	10	2,274
Trust in European Parliament (wave 2)	3.85	2.40	0	10	2,639
Trust in European Parliament (wave 3)	4.36	2.25	0	10	2,274
<b>Independent Variables</b>					
Age (wave 2)	46.14	15.09	18	88	2,639
Age (wave 3)	47.84	14.81	18	89	2,274
Economic situation in Spain (wave 2)	-0.09	0.76	-1.35	2.18	2,639
Economic situation in Spain (wave 3)	0.11	0.77	-1.35	2.18	2,274
Education level (wave 2)	4.79	1.08	1	6	2,639
Education level (wave 3)	4.78	1.08	1	6	2,274
EU knowledge (wave 2)	2.18	0.61	1	4	2,639
EU knowledge (wave 3)	2.25	0.59	1	4	2,274
EU performance (wave 2)	0.25	0.43	0	1	2,639
EU performance (wave 3)	0.34	0.47	0	1	2,274
Government performance evaluation (wave 2)	0.16	0.37	0	1	2,639
Government performance evaluation (wave 3)	0.17	0.37	0	1	2,274
Left-right ideology (wave 2)	3.94	2.27	0	10	2,639
Left-right ideology (wave 3)	3.99	2.43	0	10	2,274
Male (wave 2)	0.51	0.50	0	1	2,639
Male (wave 3)	0.54	0.50	0	1	2,274
Personal economic situation index (wave 2)	-0.01	0.97	-1.38	1.77	2,639
Personal economic situation index (wave 3)	0.04	0.93	-1.38	1.77	2,274
Political interest (wave 2)	2.58	0.83	1	4	2,639
Political interest (wave 3)	2.69	0.80	1	4	2,274
Social trust index (wave 2)	-0.10	0.94	-2.08	2.46	2,639
Social trust index (wave 3)	0.14	0.86	-2.08	2.46	2,274
Trust in Spanish Government (wave 2)	2.37	2.65	0	10	2,639
Trust in Spanish Government (wave 3)	2.50	2.52	0	10	2,274
Trust in Spanish Parliament (wave 2)	3.21	2.58	0	10	2,639
Trust in Spanish Parliament (wave 3)	3.56	2.44	0	10	2,274

**Table G. Within-Between Multilevel Model of Trust in the European Institutions  
in Spain – Individual-level Panel Dataset**

	Trust in EU Parliament				Trust in EU Commission			
	Null 7		Model 22		Null 8		Model 23	
	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)	$\beta$	(se)
<i>Longitudinal Coefficients</i>								
Left-right schema			0.02	(0.02)			0.06**	(0.02)
Interest in politics			0.03	(0.02)			0.05*	(0.02)
Social trust index			0.08***	(0.02)			0.06**	(0.02)
Personal economic situation index			0.02	(0.02)			0.02	(0.02)
Economic situation in Spain index			0.04	(0.02)			0.03	(0.02)
Government performance			0.02	(0.02)			0.02	(0.02)
EU-knowledge			0.07***	(0.02)			0.06**	(0.02)
EU performance evaluation			0.23***	(0.02)			0.21***	(0.02)
Trust in Parliament (Spain)			0.17***	(0.02)				
Trust in Government (Spain)							0.09***	(0.02)
<i>Cross-Sectional Coefficients</i>								
Age			-0.07*	(0.03)			-0.05	(0.03)
Male (ref.: female)			-0.03	(0.06)			-0.15*	(0.06)
Education level			0.05	(0.03)			0.03	(0.03)
Left-right schema			-0.06	(0.03)			-0.06	(0.03)
Interest in politics			0.23***	(0.03)			0.17***	(0.03)
Social trust index			0.15***	(0.03)			0.20***	(0.03)
Personal economic situation index			0.02	(0.03)			0	(0.03)
Economic situation in Spain index			0.11**	(0.03)			0.15***	(0.04)
Government performance			-0.17***	(0.04)			-0.30***	(0.04)
EU-knowledge			0.19***	(0.03)			0.16***	(0.03)
EU performance evaluation			0.76***	(0.03)			0.93***	(0.03)
Trust in Parliament (Spain)			1.01***	(0.03)				
Trust in Government (Spain)							0.86***	-0.04
Constant	4.06***	(0.04)	4.10***	(0.04)	3.83***	(0.04)	3.92***	(0.04)
<i>Variance components</i>								
Respondents intercept	3.43***	(0.13)	1.08	(0.07)	3.39***	(0.13)	1.20**	(0.07)
Residuals	2.09***	(0.07)	1.79***	(0.06)	1.99***	(0.07)	1.79***	(0.06)
Log Likelihood	-10,718.18		-9,421.3		-10,644.75		-9,498.11	
AIC	21,442.35		18,890.6		21,295.5		19,044.22	
ICC Respondents	0.62		0.38		0.63		0.40	
Number of Respondents	3,064		3,064		3,064		3,064	
Number of Observations	4,913		4,913		4,913		4,913	

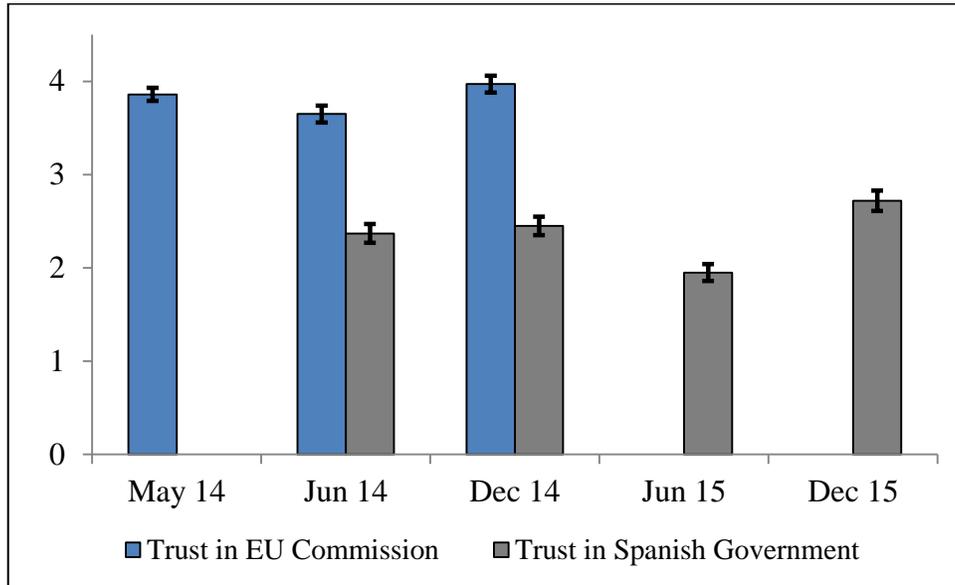
Notes: Multilevel regression; standardized  $\beta$  (except: gender); standard errors in parentheses; significance (two-tailed) \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ . AIC: Akaike's Information Criterion, ICC: Intraclass Correlation Coefficient.

**Table H. OLS Regression with Lagged Predictors of Trust in the European Institutions in Spain – Individual-level Panel Dataset**

	Trust in Rep. Inst. EU	
	Model 24	
	$\beta$	(se)
Age	0.06	(0.04)
Male (ref.: female)	0.04	(0.09)
Education level	0.12**	(0.04)
Left-right schema (lag)	-0.01	(0.05)
Interest in politics (lag)	0.23***	(0.04)
Social trust index (lag)	0.12**	(0.04)
Personal economic situation index (lag)	0.00	(0.04)
Economic situation in Spain index (lag)	0.08	(0.05)
Government performance evaluation (lag)	-0.07	(0.05)
EU-knowledge (lag)	0.18***	(0.03)
EU performance evaluation (lag)	0.51***	(0.05)
Trust in rep. Institutions (lag)	0.87***	(0.06)
Constant	4.12***	(0.06)
R-squared	0.34	
Number of Respondents	1,849	

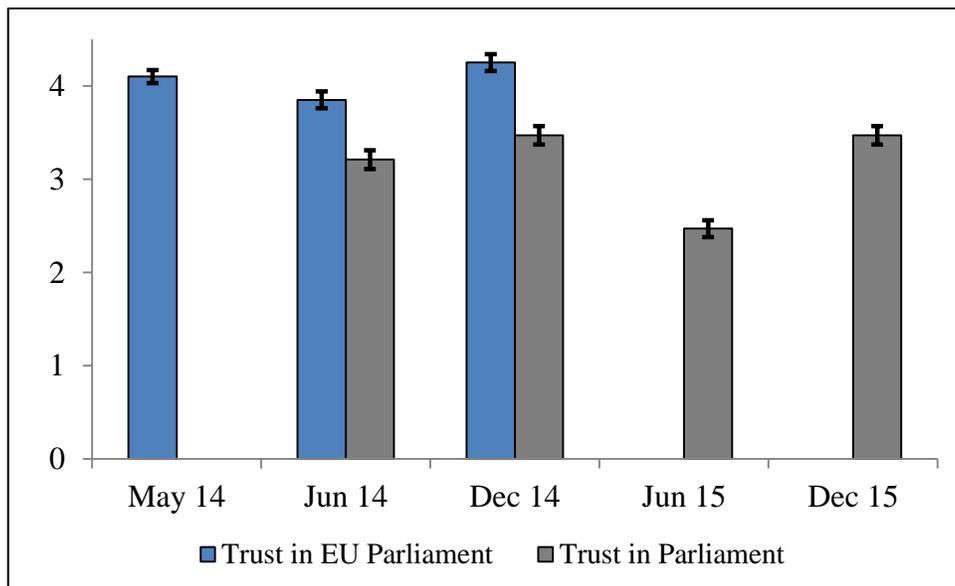
Notes: OLS regression with lagged predictors; standardized  $\beta$  (except: gender); standard errors in parentheses; significance (two-tailed) \*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

**Figure L: Average Trust in Government in Spain and the EU**  
**- CIUPANEL**



Notes: Average values; measured on a 0-10 scale, 95% Confidence Interval. Source: CIUPANEL.

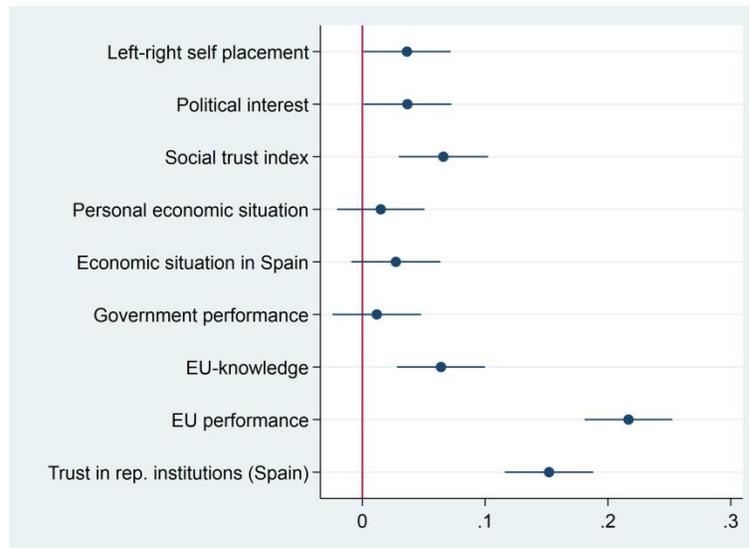
**Figure M: Average Trust in Parliament in Spain and the EU**  
**- CIUPANEL**



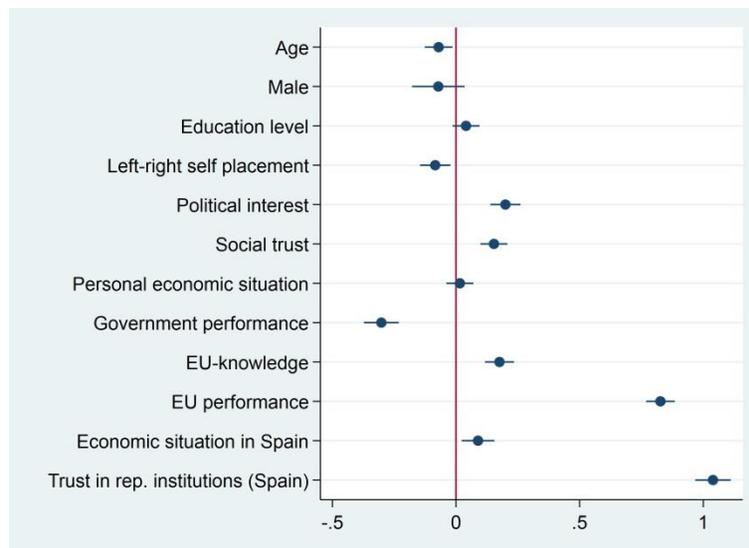
Notes: Average values; measured on a 0-10 scale, 95% Confidence Interval. Source: CIUPANEL.

**Figure N. Marginal Effects Plots – Individual-level Panel Dataset**

*‘Within’ Coefficients*



*‘Between’ Coefficients*



*Notes:* Marginal effects plot of ‘between’ estimators based on Model 6. All variables are standardized (except: gender). Lines represent 95%-CI.