Supplemental Materials: Rejecting Representation? Party Systems and Popular Support for Referendums in Europe

August 30, 2020

Contents

Variable Descriptions

Table S.1: Variables from the *European Social Survey*, Wave 6

Item	**Description**
Referendum Support	How important do you think it is for democracy in general that citizens have the final say on the most important political issues by voting on them directly in referendums? (0-10)
Political Trust	How much do you personally trust each of the institutions I read out....parties/politicians/parliament? (Index from 0-10)
External Efficacy	How often do you think the government in [country] today changes its planned policies in response to what most people think? (0-10)
Political Interest	How interested would you say you are in politics? (1 = Not at all interested, 4 = Very interested)
Party Alternatives	Different political parties in [country] offer clear alternatives to one another. (1 = Does not apply at all, 10 = Applies completely)
Imp. Democracy	How important is it for you to live in a country that is governed democratically? (0-10)
Ideology (LR)	In politics people sometimes talk of "left"" and "right." Where would you place yourself on this scale, where 0 means the left and 10 means the right?
Education (years)	About how many years of education have you completed, whether full-time or part-time?
Income	Please tell me which letter describes your household's total income, after tax and compulsory deductions, from all sources? (Income in deciles.)
Female	Female = 1, Male = 0.
Age	Age in years.

Table S.2: Descriptions of country-level variables.

Variable	**Source**	**Description**
No. Parties (seats)	CPDS	Effective number of parties on the seats level.
No. Parties (votes)	CPDS	Effective number of parties on the votes level.
Referendum Frequency	CPDS	Frequency of referendums. Coded: 0 = None or infrequent, 1 = frequent.
GDP Growth	CPDS	Percent change in real GDP growth from 2011 to 2012.
Population (logged)	CPDS	Population in thousands, logged.
Federalism	CPDS	Federalism. Coded: 0 = no; 1 = weak; 2 = strong.
Ln Pop. Votes, 02 - 12	V-Dem	Logged number of popular votes between 2002 - 2012.
Ln Pop. Vote, 90 - 12	V-Dem	Logged number of popular votes between 1990 and 2012.
Pop. Vote 2012, dummy	V-Dem	Dummy variable, popular vote held in 2012.
Electoral Dem. Index	V-Dem	Index of democratic quality. "To what extent is the ideal of electoral democracy in its fullest sense achieved?" See v2x_polyarchy in Coppedge et al. (2017).
Popular Vote Index	V-Dem	Index indicating the potential of popular vote processes. Scaled from 0-1, higher values indicates increased availability and legal consequence. See Altman (2017).
Binding Pop Votes	V-Dem	Dummy variable. Coded: 1 = Binding popular votes allowed; 2 = binding popular vote not allowed.
Corruption Index	V-Dem	Political Corruption index, running from less corrupt to more corrupt.
Age Democracy (logged)	DPI	How long has the country been democratic, in years.
Dist. Magnitude	NLPS	Mean district magnitude at the first electoral tier.
Change DM, 1990-2012	NLPS	Change in average district magnitude at the first electoral tier between 1990 and 2012.
Unemployment	WB	Unemployment as a percent of the total labor force.
Mass Polarization	ESS	Mass left-right polarization. Measure based on (Lauka et al., 2018).
Party Polarization	CSES	Party polarization. Measure based on (Dalton, 2008)

CPDS = Comparative Political Dataset, V-Dem = Varieties of Democracy Dataset, DPI = Database of Political Institutions, WB = World Bank. NLPS = National Level Party System Dataset. CSES = Comparative Study of Electoral Systems. ESS = European Social Survey (Wave 6).

Descriptive Statistics

Table S.3: Country means (2012): Referendum support, political trust, and the effective number of legislative parties.

Country	Ref. Support	Political Trust	No. Legislative Parties
Netherlands	7.20	5.17	5.72
Belgium	7.56	4.52	8.43
Portugal	7.91	2.04	2.93
Finland	7.94	5.22	5.82
Slovenia	7.95	2.53	4.63
Germany	7.99	4.13	4.83
Slovakia	8.02	2.89	2.88
France	8.04	3.48	2.84
Czech Republic	8.09	2.83	4.51
United Kingdom	8.12	3.91	2.58
Sweden	8.12	5.21	4.53
Lithuania	8.24	2.94	5.47
Iceland	8.25	3.86	4.19
Norway	8.29	5.52	4.06
Estonia	8.39	3.48	3.84
Ireland	8.43	3.24	3.55
Denmark	8.44	5.57	5.61
Italy	8.63	2.39	3.08
Switzerland	8.69	5.47	5.58
Hungary	8.71	3.49	1.98
Bulgaria	8.79	1.92	3.30
Poland	8.83	2.44	3.00
Spain	8.85	2.41	2.61
Cyprus	9.01	2.73	3.60
All countries	8.27	3.64	4.15

Note: Referendum support and political trust are drawn from Wave 6 of the *European Social Survey* while the effective number of parties is from the *Comparative Political Data Set*. Individual-level survey items are weighted by ESS sampling weights.

Figure S.1: Distributions of support for referendums by country.

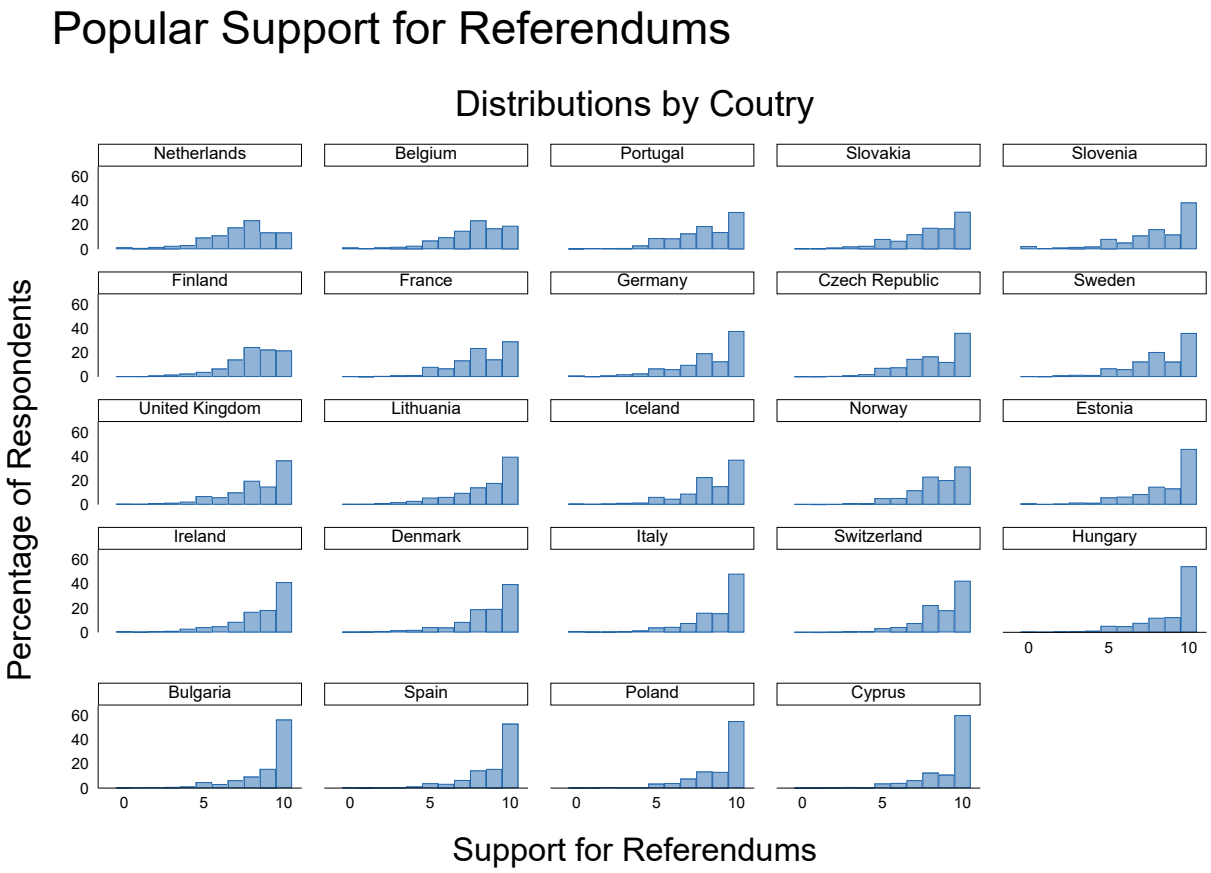


Table S.4: Availability of different popular vote processes by country in 2012. Data from the *Varieties of Democracy Dataset.*

Country	**Bottom-up Referendums**	**Top-down Referendums**	**Initiatives**
Belgium	Not Allowed	Binding	Not Allowed
Great Britain	Not Allowed	Non-Binding	Not Allowed
Bulgaria	Binding	Binding	Binding
Cyprus	Not Allowed	Not Allowed	Not Allowed
Czech Rep.	Not Allowed	Not Allowed	Not Allowed
Denmark	Not Allowed	Binding	Not Allowed
Estonia	Not Allowed	Binding	Not Allowed
Germany	Not Allowed	Not Allowed	Not Allowed
Finland	Not Allowed	Non-Binding	Not Allowed
France	Not Allowed	Binding	Not Allowed
Hungary	Binding	Binding	Binding
Iceland	Not Allowed	Non-Binding	Not Allowed
Ireland	Not Allowed	Binding	Not Allowed
Italy	Binding	Not Allowed	Not Allowed
Lithuania	Not Allowed	Binding	Binding
Netherlands	Not Allowed	Non-Binding	Not Allowed
Norway	Not Allowed	Non-Binding	Not Allowed
Poland	Not Allowed	Binding	Not Allowed
Portugal	Not Allowed	Binding	Not Allowed
Slovakia	Binding	Binding	Binding
Slovenia	Binding	Binding	Binding
Spain	Not Allowed	Non-Binding	Not Allowed
Sweden	Not Allowed	Non-Binding	Not Allowed
Switzerland	Binding	Not Allowed	Binding
Total Binding	6	12	6
Total Non-binding	0	7	0
Total Not Allowed	18	5	18

Parties and Electoral Systems

The models in Table S.5 introduce different variables intended to capture the influence of the electoral system. The models are intended to test the robustness of the effect of the number of parties on referendum support and therefore do not include the mediating variables, political trust and external efficacy. Consistent with the proposed mechanism, the coefficient on the number of parties is diminished when the mediators are included in the model.

The Models 1 - 4 use average district magnitude instead of the majoritarian dummy variable used in the paper. This measure is from the *National Level Party System Dataset* and indicates average district magnitude at the first electoral tier. Average district magnitude is left transformed in Models 1 and 2 and is logged in Models 3 and 4.

Model 5 and 6 add the *change* in average district magnitude at the first electoral tier from 1990 to 2012. This variable captures changes from single-member districts to PR, which require increasing average district magnitude beyond one, as well as more modest increases in proportionality. Higher values indicate increases in district magnitude over this period. For countries that democratized after 1990, I use the first available value in the *National Level Party System Dataset*. The most significant increase in district magnitude occurred in Slovakia, which changed 4 electoral districts into one countrywide constituency in 1998 (Hardman and Renwick, 2011).

Table S.5: Multilevel models of referendum support in 24 countries.

	(1)	(2)	(3)	(4)	(5)	(6)
Country-Level						
No. Parties (seats)	-0.117***	-0.103**	-0.116**	-0.100**	-0.156***	-0.131***
	(0.042)	(0.042)	(0.051)	(0.049)	(0.050)	(0.051)
Electoral Dem. Index	-1.802*	-2.165**	-1.315	-1.612	-2.302*	-2.262*
	(0.968)	(0.962)	(1.194)	(1.143)	(1.255)	(1.276)
Ln Pop. Votes, 02 - 12	0.076	0.088*	0.068	0.082	0.071	0.083
	(0.053)	(0.052)	(0.063)	(0.060)	(0.061)	(0.062)
Ln Population	-0.015	0.010	-0.038	-0.016	-0.015	0.001
	(0.043)	(0.043)	(0.053)	(0.051)	(0.052)	(0.053)
Dist. Magnitude	-0.005***	-0.005***				
	(0.001)	(0.001)				
Ln Dist. Magnitude			-0.087*	-0.100**		
			(0.052)	(0.050)		
Majoritarian					-0.202	-0.062
					(0.192)	(0.195)
Change DM, 1990 - 2012					-0.006**	-0.005*
					(0.003)	(0.003)
Individual Level						
Political Interest		-0.027*		-0.027*		-0.027*
		(0.014)		(0.014)		(0.014)
Party Alternatives		0.061***		0.061***		0.061***
		(0.005)		(0.005)		(0.005)
Imp. Democracy		0.205***		0.205***		0.205***
		(0.006)		(0.006)		(0.006)
Ideology (LR)		-0.030***		-0.030***		-0.030***
		(0.005)		(0.005)		(0.005)
Education (years)		-0.024***		-0.024***		-0.024***
		(0.003)		(0.003)		(0.003)
Income		-0.027***		-0.027***		-0.027***
		(0.004)		(0.004)		(0.004)
Female		0.110***		0.110***		0.110***
		(0.022)		(0.022)		(0.022)
Age		-0.002***		-0.002***		-0.002***
		(0.001)		(0.001)		(0.001)
Variance Components						
Country Level	0.070***	0.069***	0.102***	0.093***	0.095***	0.097***
	(0.021)	(0.021)	(0.030)	(0.028)	(0.028)	(0.029)
Individual Level	3.927***	3.661***	3.927***	3.661***	3.927***	3.661***
	(0.027)	(0.029)	(0.027)	(0.029)	(0.027)	(0.029)
Observations	43415	31049	43415	31049	43415	31049
Log Likelihood	-91339	-64240	-91343	-64243	-91342	-64244

*p<0.1; **p<0.05; ***p<0.01

Models including measures of polarization

The models in Table S.6 include two measures of polarization. The first is a measure of mass ideological polarization based on Lauka et al. (2018). This measure is based on the proportion of individuals who place themselves at the upper or lower extremes of the 10-point left-right scale in the ESS (2012). For each country, I multiplied the proportion of individuals within the three leftmost and rightmost values then divided that product by 0.25 (Lauka et al., 2018, 118). The measure ranges from 0.03 to 0.20 with higher values indicating greater ideological polarization at the country level. The second measure is Dalton's (2008) measure of party polarization, which is available as country-level variable from *The Comparative Study of the Electoral Systems*. The party polarization measure indicates parties' spread around the ideological center in each country (Dalton, 2008, 906). Because the party polarization variable is missing values for Cyprus, Slovakia, and Lithuania, Models 9 and 10 only include 21 countries instead of the usual 24.

Models 7 and 8 include the mass polarization measure while Models 9 and 10 include the party polarization measure. As shown here, the effective number of parties remains statistically significant and negatively signed when either polarization measure is included in the model. This indicates that the effect of the number of parties is not dependent on greater polarization in systems with fewer number of parties. While not included here—because polarization is likely to be greater in majoritarian systems—the substantive results are unchanged if I include the majoritarian dummy variable in these models.

Table S.6: Multilevel models of referendum support.

	(7)	(8)	(9)	(10)
Country-level				
No. Parties (seats)	-0.120**	-0.106*	-0.132**	-0.130**
	(0.054)	(0.053)	(0.052)	(0.051)
Mass Polarization	1.621	1.526		
	(1.824)	(1.793)		
Party Polarization			-0.002	-0.014
			(0.097)	(0.096)
Ln Pop. Votes, 02 - 12	0.058	0.071	0.093	0.091
	(0.065)	(0.064)	(0.063)	(0.062)
Electoral Dem. Index	-1.564	-1.943	-1.788	-1.931
	(1.235)	(1.211)	(1.263)	(1.248)
Ln Population	-0.016	0.009	0.011	0.030
	(0.054)	(0.053)	(0.056)	(0.055)
Individual-level				
Political Interest		-0.027*		-0.028*
		(0.014)		(0.015)
Party Alternatives		0.061***		0.057***
		(0.005)		(0.005)
Imp. Democracy		0.205***		0.195***
		(0.006)		(0.007)
Ideology (LR)		-0.030***		-0.033***
		(0.005)		(0.005)
Education (years)		-0.024***		-0.025***
		(0.003)		(0.003)
Income		-0.027***		-0.035***
		(0.004)		(0.005)
Female		0.110***		0.119***
		(0.022)		(0.023)
Age		-0.002***		-0.002***
		(0.001)		(0.001)
Country Level	0.111***	0.106***	0.097***	0.094***
	(0.033)	(0.031)	(0.031)	(0.030)
Individual Level	3.927***	3.661***	3.905***	3.673***
	(0.027)	(0.029)	(0.028)	(0.031)
Observations	43415	31049	38535	28143
Log Likelihood	-91344	-64245	-80966	-58278

*p<0.1; **p<0.05; ***p<0.01

Note: The effective number of parties is significant at p = 0.056 in Model 8. Models 9 & 10 include 21 countries due to listwise deletion on the party polarization measure.

Robustness Checks

Models omitting specific country cases

Table S.7: Models of referendum support in 24 countries. Random effects at the country level.

	(11) NL	(12) CH	(13) BE
No. Parties (seats)	-0.106**	-0.190***	-0.130*
	(0.047)	(0.053)	(0.072)
Majoritarian	-0.185	-0.173	-0.136
	(0.178)	(0.187)	(0.210)
Ln Pop. Votes, 02 - 12	0.045	-0.090	0.048
	(0.057)	(0.082)	(0.067)
Electoral Dem. Index	-2.475**	-2.486**	-2.251
	(1.176)	(1.241)	(1.414)
Ln Population	0.013	-0.039	-0.010
	(0.049)	(0.052)	(0.059)
Variance Components			
Country-level	0.083***	0.092***	0.117***
	(0.025)	(0.028)	(0.035)
Individual-level	3.893***	3.978***	3.902***
	(0.027)	(0.027)	(0.027)
Observation	41619	41969	41591
Log Likelihood	-87381	-88570	-87374

*p<0.1; **p<0.05; ***p<0.01

Note: The models omit the Netherlands (NL), Switzerland (CH), and Belgium (BE). When Belgium is omitted from the model, p = 0.07.

Alternative measures of popular vote frequency or availability

Table S.8: Models of referendum support in 24 countries. Random effects at the country level.

	(14)	(15)	(16)	(17)	(18)	(19)	(20)
No. Parties (seats)	-0.148**	-0.158***	-0.168***	-0.135***	-0.190***	-0.129**	-0.140***
	(0.058)	(0.049)	(0.049)	(0.052)	(0.052)	(0.053)	(0.054)
Majoritarian	-0.178	-0.167	-0.146	-0.141	-0.173	-0.101	-0.140
	(0.226)	(0.192)	(0.188)	(0.201)	(0.183)	(0.205)	(0.209)
Electoral Dem. Index	-2.380*	-2.638**	-2.384*	-2.344*	-2.486**	-2.339*	-2.166
	(1.419)	(1.296)	(1.278)	(1.342)	(1.215)	(1.345)	(1.412)
Ln Population	0.003	0.009	-0.030	-0.007	-0.039	-0.005	-0.013
	(0.066)	(0.054)	(0.062)	(0.055)	(0.051)	(0.056)	(0.057)
Ln Pop. Votes, 02 - 12	0.016				-0.090	0.174	0.046
	(0.102)				(0.080)	(0.143)	(0.074)
Pop. Vote 2012, dummy	0.136						
	(0.314)						
Popular Votes, 2012		0.054**	-0.015				
		(0.026)	(0.063)				
Switzerland			0.945				
			(0.798)				
Ln Pop. Votes, 90 - 12				0.067			
				(0.053)			
Referendum Frequency					1.110**		
					(0.435)		
Direct Pop. Vote Index						-0.800	
						(0.822)	
Binding Pop. Vote							0.016
							(0.166)
Variance Components							
Country Level	0.112***	0.098***	0.093***	0.108***	0.088***	0.108***	0.112***
	(0.033)	(0.029)	(0.027)	(0.032)	(0.026)	(0.032)	(0.033)
Individual Level	3.927***	3.927***	3.927***	3.927***	3.927***	3.927***	3.927***
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
Observations	43415	43415	43415	43415	43415	43415	43415
Log Likelihood	-91344	-91343	-91342	-91344	-91342	-91344	-91344

*p<0.1; **p<0.05; ***p<0.01

Note: *Pop. Vote 2012, dummy* is coded as 1 if a popular vote was held in 2012 and as 0 otherwise. With respect to *referendum frequency*, only Switzerland is coded as 1, i.e., as having frequent referendums. The *popular vote index* indicates the ease of initiating popular votes and the consequences of approval (see Altman, 2017). *Binding Pop. Votes* is a dummy variable indicating legal provisions for binding popular votes through referendums or initiatives.

Models excluding the party alternatives variable

Table S.9: Multilevel models of referendum support in 24 countries. The models correspond with Models 2-5 in Table 1.

	(21)	(22)	(23)	(24)
Country-level				
No. Parties (seats)	-0.112**	-0.075	-0.080*	-0.055
	(0.050)	(0.051)	(0.045)	(0.046)
Majoritarian		0.022	-0.009	0.015
		(0.197)	(0.174)	(0.175)
Ln Pop. Votes, 02 - 12	0.059	0.059	0.061	0.058
	(0.063)	(0.063)	(0.055)	(0.056)
Electoral Dem. Index	-1.924*	-1.204	-1.354	-0.853
	(1.164)	(1.302)	(1.151)	(1.160)
Ln Population	0.001	-0.004	0.008	0.001
	(0.052)	(0.054)	(0.048)	(0.048)
Individual-level				
Political Trust		-0.105***		-0.082***
		(0.006)		(0.006)
External Efficacy			-0.061***	-0.042***
			(0.005)	(0.005)
Political Interest	-0.019	0.022	0.044***	0.073***
	(0.014)	(0.014)	(0.015)	(0.015)
Imp. Democracy	0.210***	0.221***	0.199***	0.206***
	(0.006)	(0.006)	(0.006)	(0.007)
Ideology (LR)	-0.026***	-0.017***	-0.018***	-0.013**
	(0.005)	(0.005)	(0.005)	(0.005)
Education (years)	-0.027***	-0.025***	-0.014***	-0.013***
	(0.003)	(0.003)	(0.003)	(0.003)
Income	-0.027***	-0.024***	-0.021***	-0.018***
	(0.004)	(0.004)	(0.005)	(0.005)
Female	0.113***	0.129***	0.037	0.050**
	(0.022)	(0.022)	(0.023)	(0.023)
Age	-0.002***	-0.002***	-0.002***	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Country Level	0.102***	0.101***	0.078***	0.080***
	(0.030)	(0.030)	(0.024)	(0.024)
Individual Level	3.682***	3.645***	3.205***	3.183***
	(0.029)	(0.029)	(0.029)	(0.029)
Observations	31621	31125	24234	23897
Log Likelihood	-65520	-64336	-48538	-47780

*p<0.1; **p<0.05; ***p<0.01

Other specifications

Table S.10: Models of referendum support in 24 countries. Random effects specified at the country level.

	(25)	(26)	(27)	(28)	(29)	(30)
No. Parties (seats)		-0.168***	-0.146**	-0.147***	-0.194***	-0.126**
		(0.053)	(0.058)	(0.054)	(0.056)	(0.060)
No. Parties (votes)	-0.127***					
	(0.046)					
Majoritarian	-0.019	-0.195	-0.114	-0.214	-0.045	-0.122
	(0.198)	(0.197)	(0.216)	(0.224)	(0.194)	(0.207)
Ln Population	-0.005	0.001	-0.014	0.002	-0.077	-0.014
	(0.055)	(0.054)	(0.056)	(0.058)	(0.060)	(0.056)
Electoral Dem. Index	-1.989	-4.730**	-2.242	-2.587*	-1.908	-2.088
	(1.353)	(1.966)	(1.365)	(1.424)	(1.259)	(1.379)
Corruption Index		-1.489*				
		(0.875)				
Age Democracy (logged)			0.039			
			(0.113)			
Real GDP Growth				0.030		
				(0.037)		
Federalism					0.230**	
					(0.109)	
Unemployment (world bank)						0.008
						(0.018)
Ln Pop. Votes, 02 - 12	0.058	0.081	0.049	0.054	0.020	0.051
	(0.064)	(0.065)	(0.065)	(0.065)	(0.062)	(0.065)
Variance Components						
Country Level	0.109***	0.100***	0.112***	0.109***	0.094***	0.111***
	(0.032)	(0.030)	(0.033)	(0.032)	(0.028)	(0.033)
Individual Level	3.927***	3.927***	3.927***	3.927***	3.927***	3.927***
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
Observations	43415	43415	43415	43415	43415	43415
Log Likelihood	-91344	-91343	-91344	-91344	-91342	-91344

*p<0.1; **p<0.05; ***p<0.01

Sensitivity Analysis

Even if the treatment is exogenous given the control variables, estimates of the causal mediation effect may be biased if unobserved variables affect both the mediator and the outcome. Imai et al. (2011) propose using the correlation of the errors between the mediation equation and outcome equation (ρ) at which the ACME would equal zero as a test of model's sensitivity to violations of the sequential ignorability assumption. Lower values of ρ at which the ACME would equal zero indicate increased sensitivity to unobserved post-treatment confounds. See Imai et al. (2011) for a full discussion.

The plots below show the sensitivity analyses for the ACME associated with political trust and external efficacy. Because the `mediation` package's sensitively analysis does not yet accommodate random intercept models, the sensitivity analysis is preformed using pooled models that are otherwise equivalent to those used in the paper's mediation analysis.

Figure S.2: Sensitivity analysis of political trust. Rho at which ACME = 0: -0.10

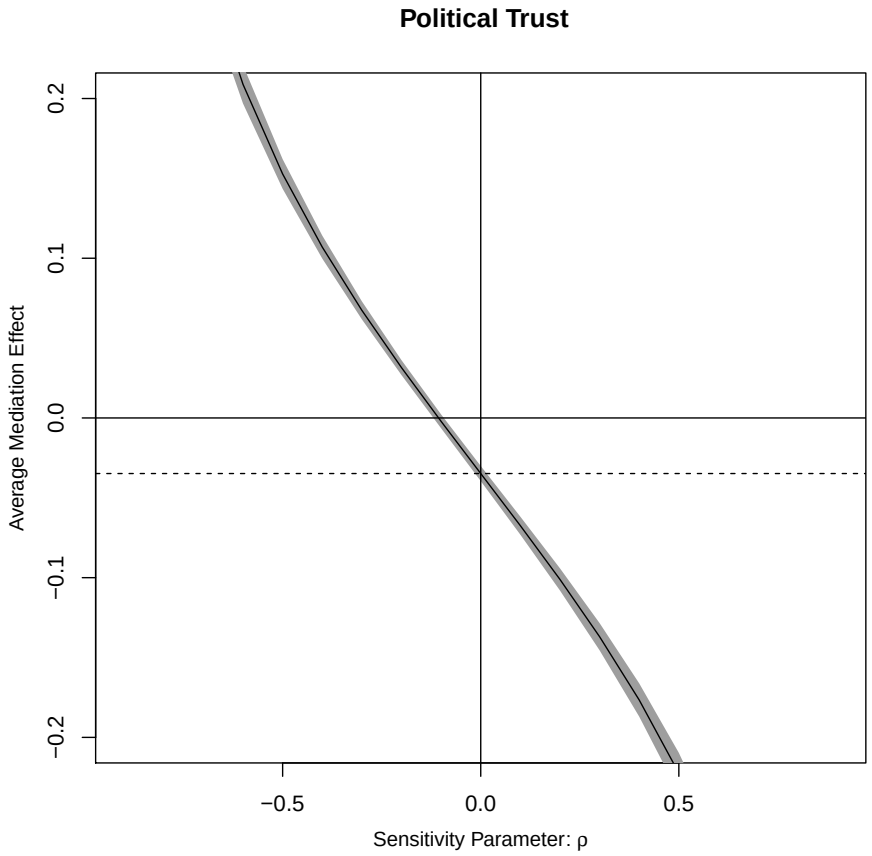
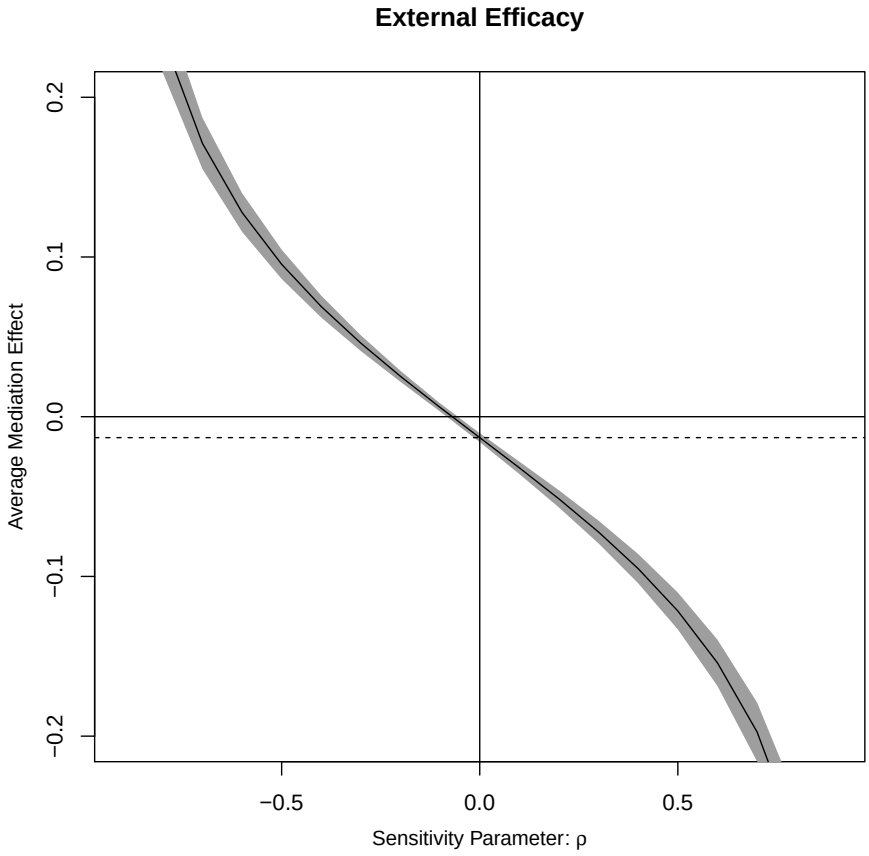


Figure S.3: Sensitivity analysis of external efficacy. Rho at which ACME = 0: -0.10



These plots indicate the mediating effect of external efficacy is slightly more sensitive to potentially omitted variables than the mediating effect of political trust. In both cases, the inclusion of the full set of control variables in the mediation and outcome models reduces the likelihood that ρ is, in fact, large.

Analysis with Pew Data (2017)

I used data from Pew's *Global Attitudes and Trends* survey to test if the relationship between the number of parties and support for deciding issues by popular vote holds in a different sample. The dependent variable indicates support for popular vote processes in general. The corresponding survey measure asks respondents if they consider *"a democratic system where citizens, not elected officials, vote directly on major national issues to decide what becomes law"* a (1) very bad, (2) somewhat bad, (3) somewhat good, or (4) very good "*way of governing the country.*" Table S.11 shows the 28 countries in the sample, average support for popular vote processes, and the effective number of legislative parties by country.

Table S.11: Country means (2017): Support for popular votes processes and the effective number of legislative parties.

Country	Support Pop. Votes	No. of Legislative Parties
Netherlands	2.48	8.60
Sweden	2.53	4.99
Brazil	2.61	13.36
United Kingdom	2.62	2.53
Mexico	2.72	4.28
Australia	2.72	3.07
Venezuela	2.73	1.97
Indonesia	2.75	8.16
Peru	2.78	2.83
United States	2.79	1.98
Canada	2.81	3.33
Philippines	2.83	5.43
Hungary	2.89	2.01
Colombia	2.89	6.34
France	2.92	2.83
Japan	2.93	2.42
Ghana	2.95	1.89
Israel	2.96	6.94
Senegal	2.98	1.57
Germany	3.00	3.51
South Korea	3.00	2.28
Poland	3.04	2.75
Spain	3.07	4.16
Italy	3.11	3.47
Kenya	3.17	5.16
Greece	3.18	3.24
Turkey	3.36	2.61
India	3.48	3.45

The model is similar to the country-level specification presented in the main text. The main independent variable is the effective number of legislative parties. This variable uses the latest available value from the *National Level Party Systems* dataset, which, in most cases, corresponds with the previous national election. Other country-level variables include an index of democratic quality (V-Dem, Version 10), the logged number of popular votes between 2007 and 2017 (V-Dem, Version 10), a proxy for PR or majoritarian rule (NLPS), and logged population (World Bank). Countries are coded as majoritarian if average district magnitude in the NLPS equals one. The population measure uses the most recent available value if the observation for 2017 was missing.

Table S.12: Random effects models of support for popular vote processes in 28 countries.

	(31) HLM	(32) Ordered Probit
No. Parties (seats)	-0.053***	-0.115***
	(0.016)	(0.034)
Majoritarian	-0.185**	-0.415**
	(0.086)	(0.179)
Electoral Dem. Index	-0.413*	-1.105**
	(0.214)	(0.446)
Ln Pop. Votes, 07-17	-0.024	-0.085
	(0.065)	(0.135)
Ln Population	0.075**	0.147**
	(0.033)	(0.069)
Variance Components		
Country Level	0.030***	0.132***
	(0.008)	(0.036)
Individual Level	0.844***	
	(0.007)	
Observations	29,740	29,740
Log Likelihood	-39,731	-36,712

*p<0.1; **p<0.05; ***p<0.01

Table S.12 presents results from two random effects models. Model 31 is a hierarchical linear model and Model 32 is a multilevel ordered probit. Both models indicate that increases in the number of parties are associated with decreased support for a system where issues are decided by popular vote. Based on Model 31 a one-SD—i.e., 2.44 party—increase in the number of legislative parties is associated with a 0.13 unit decrease in support for popular vote processes. These models provide evidence that the relationship between the number of parties and support for popular vote processes (including referendums) is not a product of the sample used in the main analysis.

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