Democratic values, education, and political trust

On-line supplemental materials

Appendix A: Question wording

Source: Wave 4 1999-2002 World Values Survey Questionnaire (WVS 2014).

Democratic values
I'm going to describe various types of political systems and ask what you think about each as a way of governing this country. For each one, would you say it is a very good, fairly good, fairly bad or very bad way of governing this country?

Having a strong leader who does not have to bother with parliament and elections;
Having the army rule;
Having a democratic political system.

Response options: "very good, " "good, " "bad, "very bad. "
They were recoded into "very good" = 3, "good" = 2, "bad" = 1, "very bad" = 0.

Democracy may have problems but it's better than any other form of government.
Response options: "agree strongly", "agree", "disagree", "strongly disagree".

For constructing the index, they were recoded to: "agree strongly" = 3, "agree" = 2, "disagree" = 1, "strongly disagree" = 0.

Trust in parliament
I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?
Response options: "A great deal", "Quite a lot", "Not very much", "None at all".

Education
At what age did you (or will you) complete your full time education, either at school or at an institution of higher education? Please exclude apprenticeships.

Income
Here is a scale of incomes. We would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come in. Just give the letter of the group your household falls into, before taxes and other deductions.

Response options: *1 2 3 4 5 6 7 8 9 10*
C D E F G H I J K L

Note: For more information about differences in the measurement of household income across surveys in the World Values Survey see: Donnelly and Pop-Eleches (2018).

Appendix B: Democratic values invariance test

Items:

Having a democratic political system,
Democracy may have problems but it's better than any other form of government,
Having a strong leader,
Having the army rule.

N surveys: 107.

N individuals: 98,444.

Multi-Group Factor Analysis Alignment with the `sirt` package (Robitzsch, 2019)

Alignment Power Values = 0.25 0.25
Alignment Scale Values = 1 1
Epsilon Value = 0.001

Alignment Results Lambda Parameters

Parameter tolerance value = 1
Total number of items = 428
Number of unique item parameters = 5
Percentage of non-invariant item parameters = 0.2%

Unique item parameters per item
Having a democratic political system: 0
Democracy may have problems but it's better than any other form of government: 1
Having a strong leader: 0
Having the army rule: 0

Joint item parameters
Having a democratic political system: 0.524
Democracy may have problems but it's better than any other form of government: 0.475
Having a strong leader: -.404
Having the army rule: -0.295

Item parameters in the sample from Morocco:
Having a democratic political system: 0.524
Democracy may have problems but it's better than any other form of government: -0.548
Having a strong leader: -.404
Having the army rule: -0.295

Appendix C: Political trust invariance test

Items: trust in parliament, trust in justice system, trust in political parties.

N countries: 43.

N individuals: 39,943.

Multi-Group Factor Analysis Alignment with the `sirt` package (Robitzsch, 2019)

Alignment Power Values = 0.25 0.25
Alignment Scale Values = 1 1
Epsilon Value = 0.001

Parameter tolerance value = 1
Total number of items = 129
Number of unique item parameters = 3
Percentage of non-invariant item parameters = 0%

Unique item parameters per item
Trust in political parties: 0
Trust in justice system: 0
Trust in parliament: 0

Joint item parameters
Trust in political parties: 0.487
Trust in justice system: 0.382
Trust in parliament: 0.660

Appendix D: Supplemental models: Excluding the survey from Morocco

Table D1. Descriptive statistics.

Variable name	Mean	Standard deviation	Minimum	Maximum
Individual-level variables (N = 99,253)				
Trust in parliament	1.274	0.898	0	3
Democratic values	2.848	2.242	-6	6
Education, years	10.805	3.972	0	20
Household income	4.733	2.509	1	10
Age	41.125	15.741	16	95
Female	0.485	0.500	0	1
Country-year-level variables (N = 108)				
V-Dem Liberal Democracy index	0.550	0.256	0.061	0.890
GDP per capita, 1000 USD	16.434	13.311	1.067	71.471
GDP per capita, ln	9.339	0.934	6.973	11.177
Year (year 1994 = 0)			0	9

N individual = 97,962; *N* surveys = 106; *N* countries = 72. Data: EVS/3, WVS/3-4.

Table D2. Three-level models predicting democratic values with education and the country's level of democracy.

Democratic values	Model 1.0	Model 1.1	Model 1.2	Model 1.3
Education, years			0.083***	0.049***
			(0.002)	(0.011)
Democracy			0.519	0.049
			(0.633)	(0.735)
Democracy * Education				0.066***
				(0.018)
Control variables				
Age		0.019***	0.018***	0.015***
		(0.002)	(0.002)	(0.002)
Age, squared		-0.0002***	-0.0001***	-0.0001***
		(0.00002)	(0.00002)	(0.00002)
Female		-0.095***	-0.078***	-0.084***
		(0.013)	(0.013)	(0.012)
Household income		0.092***	0.051***	0.049***
		(0.003)	(0.003)	(0.003)
GDP per capita, ln		0.543***	0.445**	0.313
		(0.118)	(0.176)	(0.203)
Year		-0.018	-0.020	-0.035
		(0.025)	(0.025)	(0.030)
Constant	2.881***	-2.938***	-3.057**	-1.447
	(0.133)	(1.119)	(1.413)	(1.633)
Variance components				
Country intercept	1.129	0.842	0.837	1.078
Survey intercept	0.187	0.191	0.188	0.246
Education slope				0.002
Residual	3.900	3.848	3.768	3.733
Fit statistics				
Log Likelihood	-208,897.0	-208,256.4	-207,222.7	-206,896.7
Akaike Inf. Crit.	417,801.9	416,532.8	414,469.4	413,821.3
Bayesian Inf. Crit.	417,839.9	416,627.7	414,583.3	413,954.2

N individual = 97,962; *N* surveys = 106; *N* countries = 72. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Data: EVS/3, WVS/3-4.
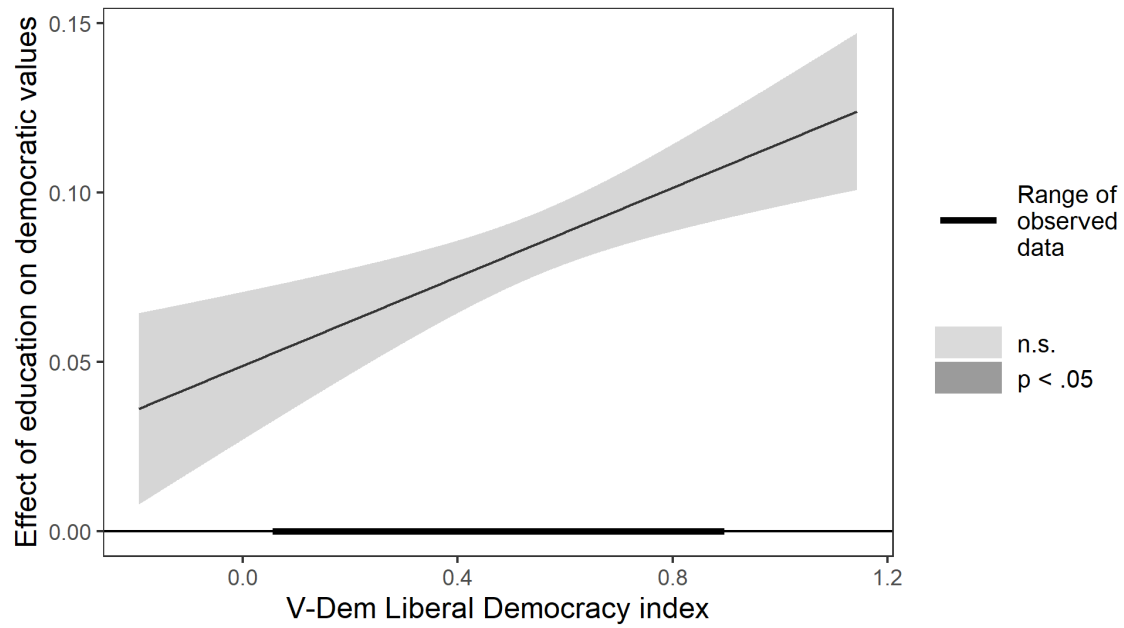
Figure D1. Conditional effects of education on democratic values by level of democracy based on Model 1.3 in Table D2.
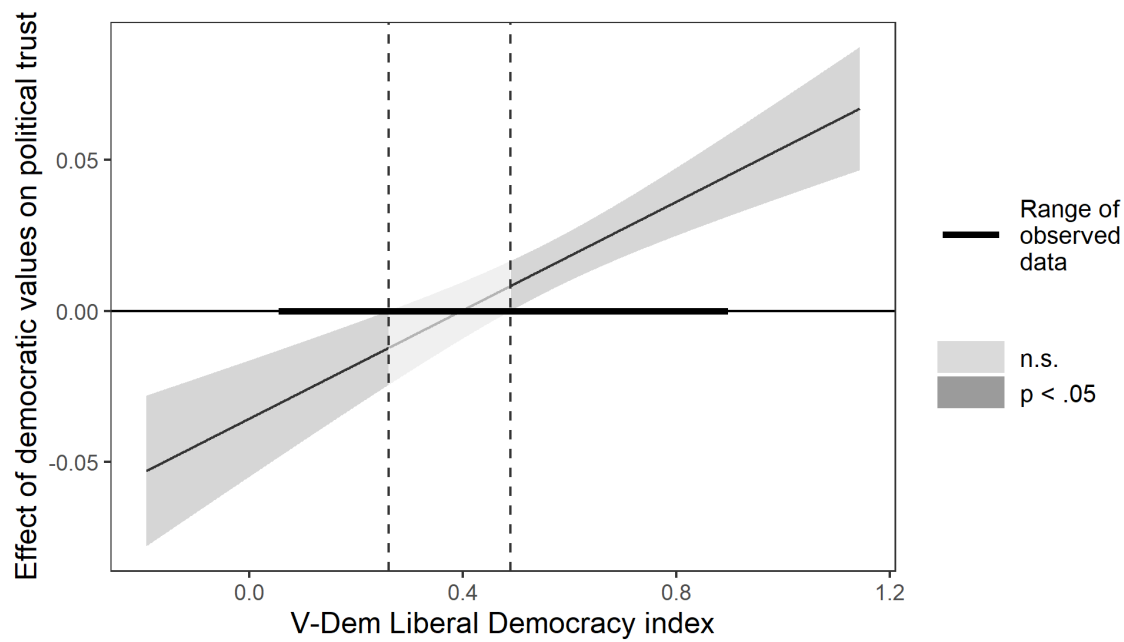

Figure D2. Conditional effects of democratic values on trust in parliament by level of democracy based on Model 2.3 in Table D3.

Table D3. Three-level models predicting trust in parliament with education, democratic values, and the country's level of democracy.

Political trust	Model 2.0	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6
Democratic values			0.012***	-0.036***		-0.029***	0.012***
			(0.001)	(0.010)			(0.001)
Democracy * Democratic values				0.090***			
				(0.016)			
Democracy			0.034	-0.279	0.038	-0.301	0.034
			(0.248)	(0.233)	(0.247)	(0.264)	(0.248)
Education, years					-0.003***	-0.022***	
					(0.001)	(0.005)	
Democracy * Education						0.039***	
						(0.008)	
Control variables							
Age		-0.004***	-0.004***	-0.004***	-0.004***	-0.006***	-0.005***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age, squared		0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
		(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)
Female		-0.0001	0.001	0.001	-0.001	-0.003	-0.002
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Household income		-0.001	-0.002*	-0.002**	0.0002	0.001	0.0001
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
GDP per capita, ln		-0.139***	-0.153**	-0.121*	-0.147**	-0.178**	-0.154**
		(0.045)	(0.069)	(0.064)	(0.068)	(0.073)	(0.070)
Year		-0.004	-0.004	0.008	-0.004	0.006	0.014
		(0.010)	(0.010)	(0.011)	(0.010)	(0.011)	(0.012)
Constant	1.314***	2.658***	2.738***	2.533***	2.736***	3.154***	2.955***
	(0.046)	(0.431)	(0.550)	(0.514)	(0.549)	(0.585)	(0.563)
Variance components							
Country intercept	0.128	0.121	0.121	0.090	0.121	0.138	0.111
Survey intercept	0.034	0.032	0.033	0.040	0.032	0.030	0.041
Education slope				0.002			0.001
Democratic values slope						0.000	0.000
Residual	0.669	0.667	0.666	0.658	0.667	0.660	0.653
Fit statistics							
Log Likelihood	-122,521.8	-122,412.1	-122,374.2	-121,872.4	-122,412.9	-122,013.5	-121,569.9
Akaike Inf. Crit.	245,051.5	244,844.3	244,772.3	243,772.8	244,849.7	244,055.0	243,173.7
Bayesian Inf. Crit.	245,089.5	244,939.2	244,886.2	243,905.6	244,963.6	244,187.9	243,335.1

N individual = 99,253; *N* surveys = 108; *N* countries = 74. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.
Data: EVS/3, WVS/3-4.

Table D4. Mediation analysis for selected levels of democracy.

Estimate	V-Dem Liberal Democracy index			
	0.1	0.4	0.7	0.9
Total effect	-0.019***	-0.008***	0.004	0.012***
Average direct effect	-0.017***	-0.008***	0.002	0.008*
Average mediation effect	-0.001***	-0.000	0.002***	0.004***
Proportion mediated	0.086***	0.043	0.455	0.314***

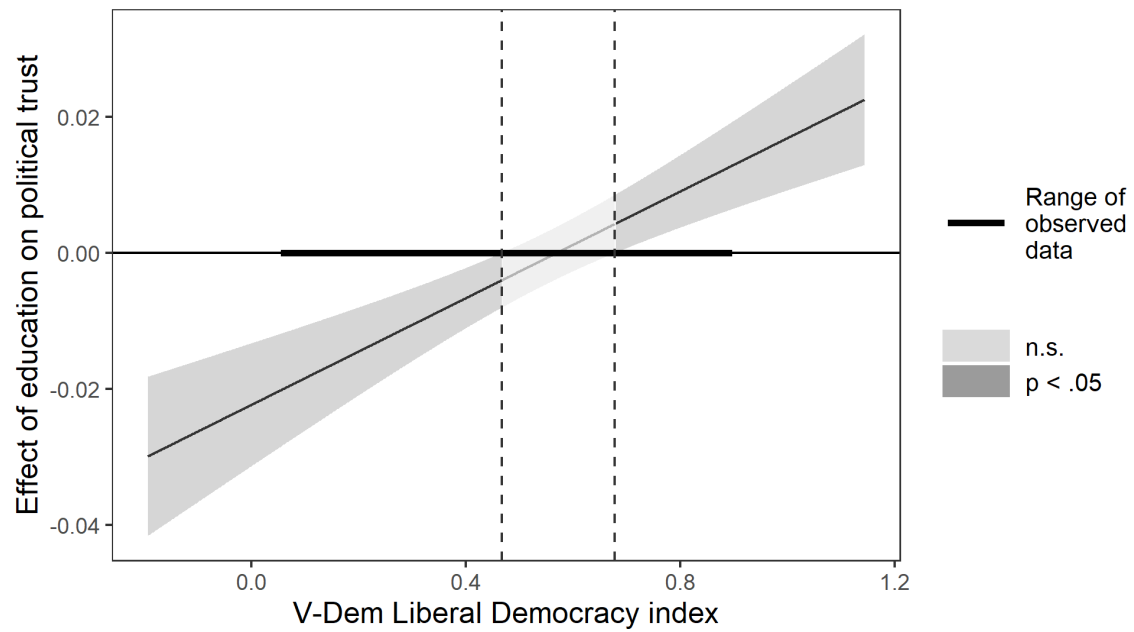+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Data: EVS/3, WVS/3-4.

Figure D3. Conditional effects of education on trust in parliament by level of democracy based on Model 2.5 in Table D3.

Appendix E: Supplemental models: Including the outlying survey from Pakistan

Table E1. Descriptive statistics.

Variable name	Mean	Standard deviation	Minimum	Maximum
Individual-level variables (N = 99,253)				
Trust in parliament	1.281	0.903	0	3
Democratic values	2.855	2.242	-6	6
Education, years	10.798	3.975	0	20
Household income	4.737	2.500	1	10
Age	41.050	15.714	16	95
Female	0.484	0.500	0	1
Country-year-level variables (N = 108)				
V-Dem Liberal Democracy index	0.543	0.259	0.061	0.890
GDP per capita, 1000 USD	16.203	13.295	1.067	71.471
GDP per capita, ln	9.319	0.937	6.973	11.177
Year (year 1994 = 0)			0	9

N individual = 99,253; *N* surveys = 108; *N* countries = 74. Data: EVS/3, WVS/3-4.

Table E2. Three-level models predicting democratic values with education and the country's level of democracy.

Democratic values	Model 1.0	Model 1.1	Model 1.2	Model 1.3
Education, years			0.081***	0.044***
			(0.002)	(0.011)
Democracy			0.269	-0.271
			(0.642)	(0.748)
Democracy * Education				0.072***
				(0.018)
Control variables				
Age		0.019***	0.018***	0.015***
		(0.002)	(0.002)	(0.002)
Age, squared		-0.0002***	-0.0001***	-0.0001***
		(0.00002)	(0.00002)	(0.00002)
Female		-0.097***	-0.080***	-0.086***
		(0.013)	(0.012)	(0.012)
Household income		0.092***	0.051***	0.049***
		(0.003)	(0.003)	(0.003)
GDP per capita, ln		0.505***	0.457**	0.323
		(0.119)	(0.181)	(0.209)
Year		-0.014	-0.017	-0.030
		(0.026)	(0.025)	(0.030)
Constant	2.904***	-2.563**	-2.986**	-1.334
	(0.131)	(1.121)	(1.450)	(1.679)
Variance components				
Country intercept	1.130	0.880	0.907	1.173
Survey intercept	0.187	0.193	0.184	0.243
Education slope				0.002
Residual	3.907	3.855	3.777	3.741
Fit statistics				
Log Likelihood	-211,735.1	-211,094.8	-210,087.6	-209,740.2
Akaike Inf. Crit.	423,478.2	422,209.6	420,199.1	419,508.3
Bayesian Inf. Crit.	423,516.2	422,304.6	420,313.2	419,641.4

N individual = 99,253; *N* surveys = 108; *N* countries = 74. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.
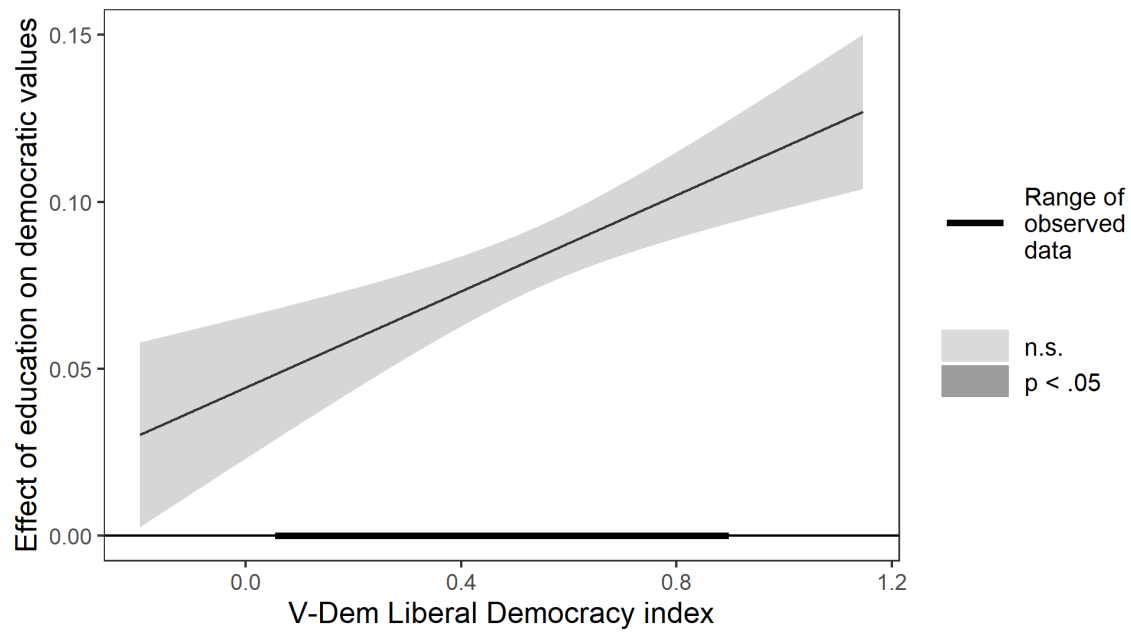Data: EVS/3, WVS/3-4.

Figure E1. Conditional effects of education on democratic values by level of democracy based on Model 1.3 in Table E2.
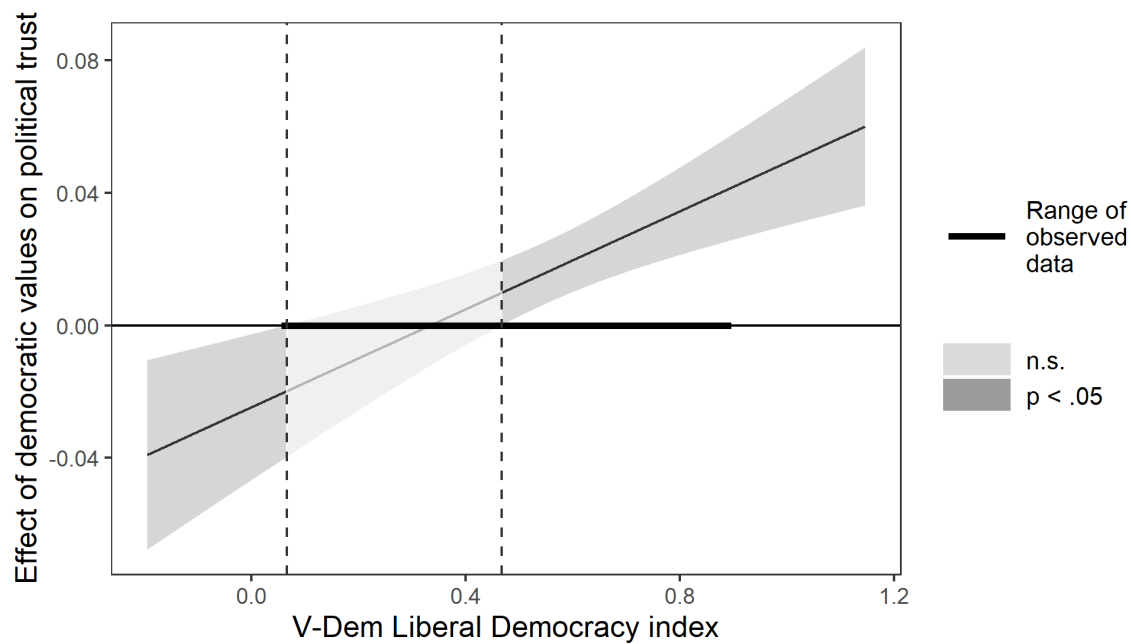

Figure E2. Conditional effects of democratic values on trust in parliament by level of democracy based on Model 2.3 in Table E3.

Table E3. Three-level models predicting trust in parliament with education, democratic values, and the country's level of democracy.

Political trust	Model 2.0	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6
Democratic values			0.015***	-0.025**			-0.019*
			(0.001)	(0.011)			(0.011)
Democracy * Democratic values				0.074***			0.062***
				(0.019)			(0.018)
Democracy			0.022	-0.043	0.025	-0.290	-0.415
			(0.252)	(0.206)	(0.252)	(0.268)	(0.255)
Education, years					-0.003***	-0.021***	-0.017***
					(0.001)	(0.004)	(0.004)
Democracy * Education						0.037***	0.029***
						(0.007)	(0.007)
Control variables							
Age		-0.004***	-0.004***	-0.004***	-0.004***	-0.005***	-0.005***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age, squared		0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
		(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)
Female		-0.001	0.001	0.001	-0.001	-0.003	-0.002
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Household income		-0.001	-0.003**	-0.003**	0.00004	0.001	-0.0001
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
GDP per capita, ln		-0.141***	-0.153**	-0.143**	-0.146**	-0.176**	-0.151**
		(0.046)	(0.071)	(0.057)	(0.070)	(0.075)	(0.071)
Year		-0.005	-0.005	0.025	-0.005	0.005	0.012
		(0.010)	(0.010)	(0.016)	(0.010)	(0.011)	(0.012)
Constant	1.316***	2.675***	2.743***	2.498***	2.736***	3.131***	2.890***
	(0.047)	(0.437)	(0.566)	(0.463)	(0.565)	(0.599)	(0.567)
Variance components							
Country intercept	0.139	0.131	0.131	0.000	0.131	0.147	0.112
Survey intercept	0.034	0.032	0.033	0.122	0.032	0.030	0.042
Education slope						0.000	0.000
Democratic values slope				0.002			0.002
Residual	0.670	0.668	0.667	0.657	0.668	0.661	0.651
Fit statistics							
Log Likelihood	-124,245	-124,135	-124,075	-123,412	-124,136	-123,740	-123,106
Akaike Inf. Crit.	248,497	248,290	248,173	246,852	248,296	247,509	246,245
Bayesian Inf. Crit.	248,535	248,385	248,287	246,985	248,411	247,642	246,407

_N_ individual = 99,253; _N_ surveys = 108; _N_ countries = 74. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.
Data: EVS/3, WVS/3-4.

Table E4. Mediation analysis for selected levels of democracy.

Estimate	V-Dem Liberal Democracy index			
	0.1	0.4	0.7	0.9
Total effect	-0.017***	-0.007***	0.004+	0.011**
Average direct effect	-0.015***	-0.007***	0.002	0.007*
Average mediation effect	-0.001**	-0.000	0.002***	0.003***
Proportion mediated	0.070**	0.022	0.433+	0.313**

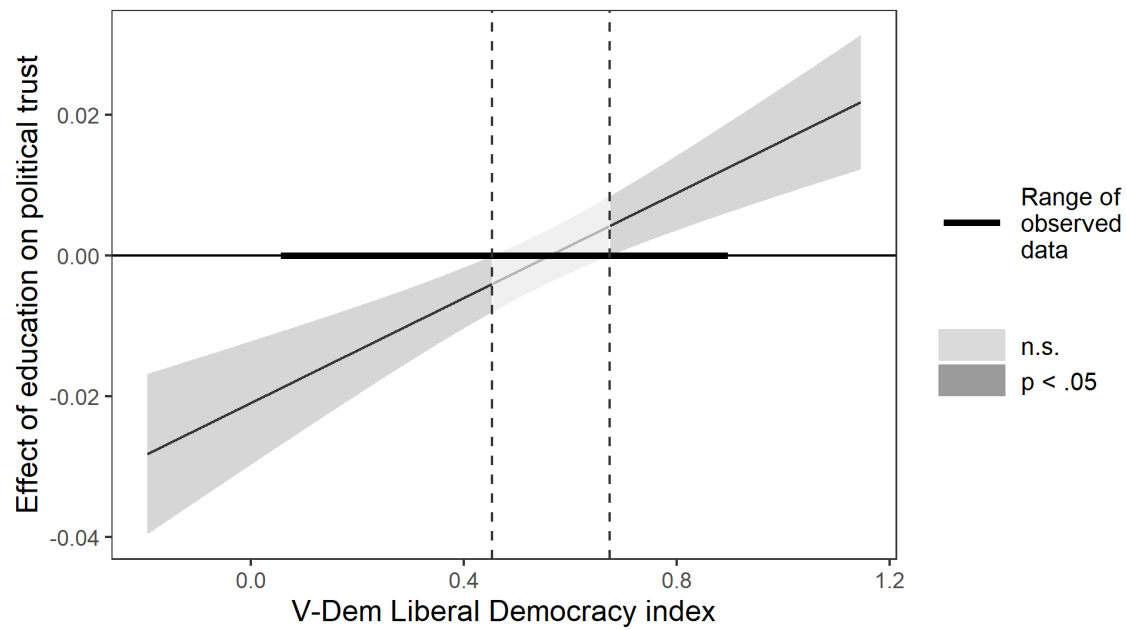+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Data: EVS/3, WVS/3-4.

Figure E3. Conditional effects of education on trust in parliament by level of democracy based on Model 2.5 in Table E3.

Appendix F: Supplemental models: Freedom House ratings as the indicator of democracy

Table F1. Descriptive statistics.

Variable name	Mean	Standard deviation	Minimum	Maximum
Individual-level variables (N = 98,237)				
Trust in parliament	1.272	0.898	0.000	3.000
Democratic values	2.853	2.243	-6.000	6.000
Education, years	10.803	3.973	0.000	20.000
Household income	4.733	2.507	1.000	10.000
Age	41.095	15.737	16.000	95.000
Female	0.485	0.500	0.000	1.000
Country-year-level variables (N = 107)				
Freedom House combined ratings, reversed	8.318	3.167	1	12
GDP per capita, 1000 USD	16.322	13.299	1.067	71.471
GDP per capita, ln	9.330	0.934	6.973	11.177
Year (year 1994 = 0)			0	9

N individual = 98,237; *N* surveys = 107; *N* countries = 73. Data: EVS/3, WVS/3-4.

Table F2. Three-level models predicting democratic values with education and the country's level of democracy measured with Freedom House combined ratings.

Democratic values	Model 1.0	Model 1.1	Model 1.2	Model 1.3
Education, years			0.082***	0.044***
			(0.002)	(0.013)
Democracy			0.053	0.044
			(0.043)	(0.050)
Democracy * Education				0.005***
				(0.001)
Control variables				
Age		0.019***	0.018***	0.014***
		(0.002)	(0.002)	(0.002)
Age, squared		-0.0002***	-0.0001***	-0.0001***
		(0.00002)	(0.00002)	(0.00002)
Female		-0.094***	-0.077***	-0.083***
		(0.013)	(0.012)	(0.012)
Household income		0.092***	0.051***	0.049***
		(0.003)	(0.003)	(0.003)
GDP per capita, ln		0.518***	0.385**	0.177
		(0.120)	(0.162)	(0.188)
Year		-0.015	-0.023	-0.035
		(0.026)	(0.026)	(0.031)
Constant	2.903***	-2.678**	-2.606**	-0.476
	(0.133)	(1.136)	(1.322)	(1.522)
Variance components				
Country intercept	1.1475	0.88749	0.85475	1.0746014
Survey intercept	0.18671	0.1925	0.19729	0.2640902
Education slope				0.0019962
Residual	3.8967	3.84489	3.7645	3.730135
Fit statistics				
Log Likelihood	-209,474.000	-208,835.800	-207,805.100	-207,481.200
Akaike Inf. Crit.	418,956.100	417,691.600	415,634.200	414,990.500
Bayesian Inf. Crit.	418,994.100	417,786.600	415,748.100	415,123.400

N individual = 98,237; *N* surveys = 107; *N* countries = 73. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.
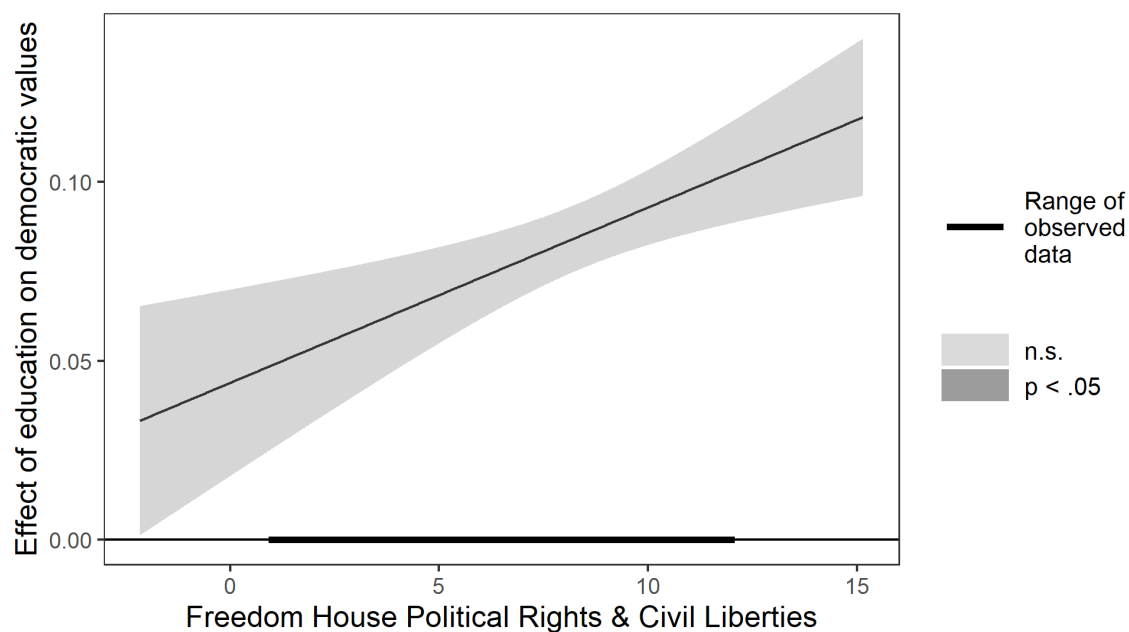Data: EVS/3, WVS/3-4.

Figure F1. Conditional effects of education on democratic values by level of democracy based on Model 1.3 in Table F2.
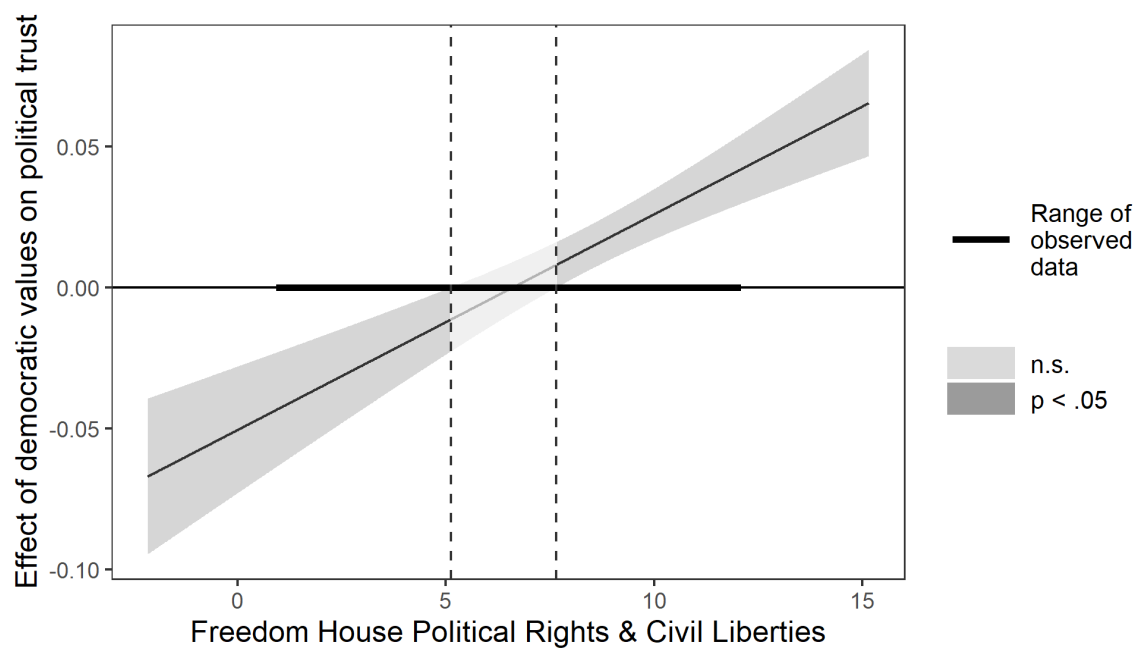

Figure F2. Conditional effects of democratic values on trust in parliament by level of democracy based on Model 2.3 in Table F3.

Table F3. Three-level models predicting trust in parliament with education, democratic values, and the country's level of democracy measured with Freedom House combined ratings.

Political trust	Model 2.0	Model 2.1	Model 2.3	Model 2.4	Model 2.5	Model 2.6	Model 2.7
Democratic values			0.012***	-0.050***			-0.042***
			(0.001)	(0.011)			(0.011)
Democracy * Democratic values				0.008***			0.007***
				(0.001)			(0.001)
Democracy			0.003	-0.026	0.004	-0.016	-0.034*
			(0.017)	(0.017)	(0.017)	(0.018)	(0.018)
Education, years					-0.003***	-0.025***	-0.020***
					(0.001)	(0.006)	(0.005)
Democracy * Education						0.003***	0.002***
						(0.001)	(0.001)
Control variables							
Age		-0.004***	-0.004***	-0.004***	-0.004***	-0.006***	-0.006***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age, squared		0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
		(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)
Female		0.00004	0.001	0.001	-0.0005	-0.003	-0.002
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Household income		-0.001	-0.002*	-0.002**	0.0001	0.001	0.00002
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
GDP per capita, ln		-0.130***	-0.143**	-0.104*	-0.140**	-0.187***	-0.155**
		(0.046)	(0.064)	(0.060)	(0.064)	(0.068)	(0.066)
Year		-0.006	-0.006	0.010	-0.006	0.006	0.016
		(0.010)	(0.011)	(0.012)	(0.010)	(0.011)	(0.012)
Constant	1.305***	2.570***	2.645***	2.429***	2.656***	3.193***	2.970***
	(0.047)	(0.436)	(0.519)	(0.481)	(0.517)	(0.553)	(0.531)
Variance components							
Country intercept	0.132	0.127	0.127	0.089	0.127	0.144	0.112
Survey intercept	0.034	0.032	0.033	0.041	0.032	0.032	0.042
Education slope						0.000	0.000
Democratic values slope				0.001			0.001
Residual	0.669	0.667	0.666	0.658	0.667	0.660	0.652
Fit statistics							
Log Likelihood	-122,878	-122,769	-122,734	-122,231	-122,773	-122,378	-121,935
Akaike Inf. Crit.	245,765	245,558	245,493	244,491	245,569	244,785	243,903
Bayesian Inf. Crit.	245,803	245,653	245,607	244,623	245,683	244,918	244,065

N individual = 98,237; N surveys = 107; N countries = 73. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.
Data: EVS/3, WVS/3-4.

Table F4. Mediation analysis for selected levels of democracy measured with Freedom House combined ratings.

Estimate	Freedom House combined ratings, reversed[1]							
	1	5	7	8	9	10	11	12
Total effect	-0.020***	-0.010***	-0.005*	-0.003	0.000	0.003	0.005*	0.009*
Average direct effect	-0.018***	-0.009***	-0.005*	-0.003	-0.001	0.001	0.003	0.005+
Average mediation effect	-0.002***	-0.001**	0.000	0.000	0.001***	0.002***	0.003***	0.003***
Proportion mediated	0.103***	0.096*	0.011	-0.122	-0.157	0.544	0.472*	0.396*

[1] Range: 0-12; 0 = the least free, 12 = the most free.
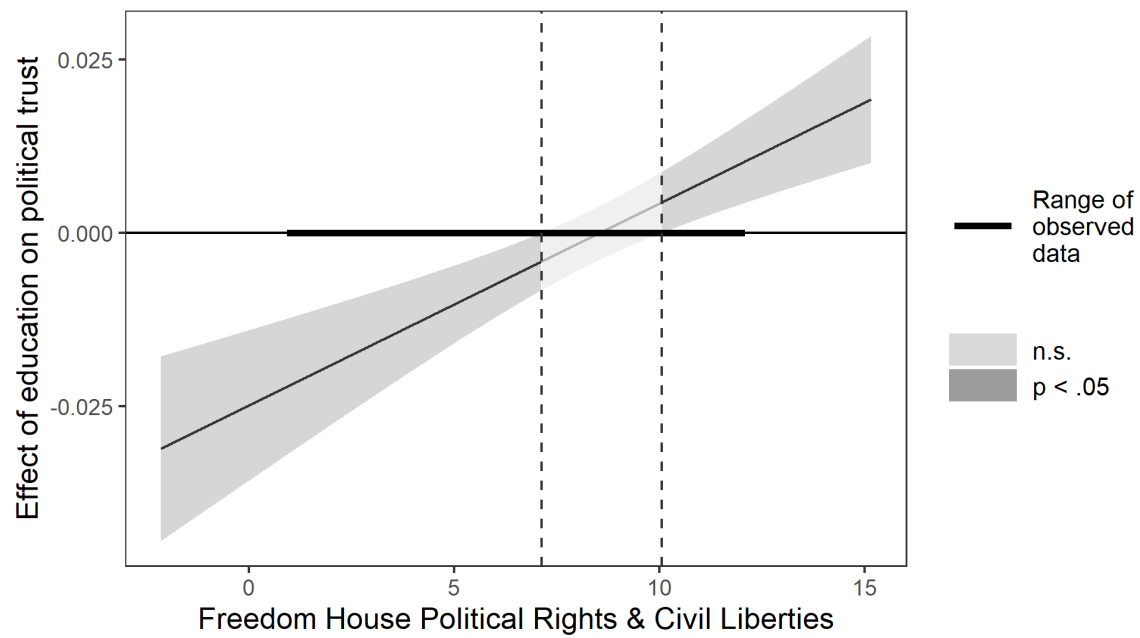+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Data: EVS/3, WVS/3-4.

Figure F3. Conditional effects of education on trust in parliament by level of democracy based on Model 2.5 in Table F3.

Appendix G: Supplemental models: Structural Equation Model

The model was estimated with the `gsem` command in Stata 15.1.

Table G1. Model estimates of multi-level structural equation model.

Variable name	Coef.	Std. Err.
Political trust		
Democratic values	0.028	0.003
Education, years	-0.024	0.003
Democracy	-0.036	0.005
Democracy * Democratic values	0.057	0.003
Democracy * Education	0.039	0.003
Age	0.038	0.003
Household income	-0.016	0.003
GDP per capita, ln	-0.242	0.005
Year	-0.001	0.001
Constant	-0.057	0.007
Democratic values		
Education, years	0.154	0.003
Democracy	0.117	0.005
Age	0.048	0.003
Household income	0.053	0.003
GDP per capita, ln	0.087	0.005
Year	-0.020	0.001
Constant	-0.052	0.006
Variance components		
M1: Country (political trust)	0.071	0.001
M2: Country (democratic values)	0.083	0.001
Covariance M1 M2	0.002	0.001
Residual (political trust)	0.843	0.004
Residual (democratic values)	0.767	0.003
Fit statistics		
Log Likelihood	-257635.8	
Akaike Inf. Crit.	515315.6	
Bayesian Inf. Crit.	515524.5	
N cases	98,237	
N countries	73	

Note: All variables were standardized prior to model estimation.

Table G2. Conditional effects summary.

Estimate	V-Dem Liberal Democracy index*			
	0.1 (-1.8)	0.4 (-0.5)	0.7 (0.6)	0.9 (1.3)
Total effect	-0.105***	-0.043***	0.009**	0.042***
Average direct effect	-0.094***	-0.043***	0	0.026***
Average mediation effect	-0.011***	0	0.010***	0.016***
Proportion mediated	0.109***	0.001	1.108	0.377***

*V-Dem Liberal Democracy index values (standardized V-Dem Liberal Democracy index values).

N individuals = 98,237; *N* countries = 73. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Data: EVS/3, WVS/3-4.

References

Donnelly MJ and Pop-Eleches G (2018) Income Measures in Cross-National Surveys: Problems and Solutions. *Political Science Research and Methods* 6(2): 355–363. DOI: 10.1017/psrm.2016.40.

Robitzsch A (2019) sirt: Supplementary Item Response Theory Models. Available at: https://cran.r-project.org/package=sirt.

World Values Survey (2014) *Wave 4 1999-2002 World Values Survey Questionnaire*. Available at: http://www.worldvaluessurvey.org (accessed 2 September 2017).