

Supporting Appendix

to the paper

When does Women's Political Power Matter? Women's Representation and Legal Gender Equality of Economic Opportunity across Contexts

This document presents the results of statistical models that we conducted but, due to space constraints, were not able to report in the paper.

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Table A1. Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	P50
WBL index	5678	60.05	17.82	17.5	100	61.3
Female legislators	5678	11.77	9.87	0	63.75	9.1
Female ministers	5678	9.35	10.26	0	62.5	6.45
Electoral democracy index	5678	49.5	28.18	1.7	92.4	47.9
Legislative power	5678	.06	.64	-1.93	1.2	.09
Female legislators × Legislature power	5678	2.22	10.33	-48	42.75	.36
Female ministers × Legislature power	5678	2.78	9.14	-42.51	56.79	0
Female legislators × Democracy	5678	672.02	796.14	0	4345.03	367.9
Female ministers × Democracy	5678	585.88	843.93	0	5590	246.34
GDP per capita (ln)	5678	8.87	1.2	5.24	12.31	8.92
Oil rents per capita (ln)	5678	2.64	2.99	0	11.33	1.47
CEDAW	5678	.67	.47	0	1	1
Women civil society participation	5678	63.76	22.59	.9	96.2	68.2
Women civil liberties	5678	65.75	25.3	0	98.2	70.5
Communist	5678	.04	.2	0	1	0
Leftist government	4818	.35	.48	0	1	0
Women's INGOs	4755	37.64	29.61	0	152	31.2
Female labor participation	3897	50.49	15.92	8.1	89.28	50.42
Fertility rate	5362	3.64	1.92	1.08	8.44	3.05
Female school enrollment	4742	61.33	36.68	.28	175.22	67.01
Foreign aid per capita (ln)	4059	3.74	.7	1.34	6.23	3.66
Lagged WBL index	5589	59.54	17.64	17.5	100	60.6

Variables	Definition/operationalization	Data Source
Baseline controls		
Female legislators	Percentage of seats held by women in the lower or single house of each country's national legislature	V-Dem dataset (Coppedge et al., 2020)
Female ministers	Percentage of seats held by women in the national cabinet	WhoGov dataset (Nyrup and Bramwell, 2020)
GDP per capita	Natural log of real GDP per capita	Penn World Table (Feenstra, Inklaar, and Timmer, 2015)
Oil income per capita	Natural log of oil income per capita	Ross and Mahdavi (2015).
Electoral democracy	Electoral democracy index	V-Dem data (Coppedge et al., 2020)
Communist	Dummy variable for communist countries	V-Dem data (Coppedge et al., 2020)
Additional variables		
Gender quotas	Dummy variable for any national level gender quota that either reserves national legislative seats or mandates candidate nominations for women through statutory law.	V-Dem data (Coppedge et al., 2020)
Women's civil liberties	Women's civil liberties index	V-Dem data (Coppedge et al., 2020)
Women's civil society participation	Women's civil society participation index	V-Dem data (Coppedge et al., 2020)
Women's INGO	Annual number of women's INGO in a country	Hughes, Quinsaat, and Reith (2017)
Female labor force participation	Fraction of the formal labor force that is made up of female citizens	WDI (World Bank, 2019)
Female education attainment	Percentage of females, aged 25 and over, who have attained at least some secondary education	WDI (World Bank, 2019)
Leftist governments	Dummy variable for leftist governing party	Database of Political Institutions (Cruz, Keefer, and Scartascini, 2018)
Fertility rate	Total births per woman	WDI (World Bank, 2019)
Foreign aid per capita	a natural log of official development assistance per capita	WDI (World Bank, 2019)

Table A2. Summary of country-level control variables.



Figure B1. Descriptive examination of the WBL index, 1970-2019.

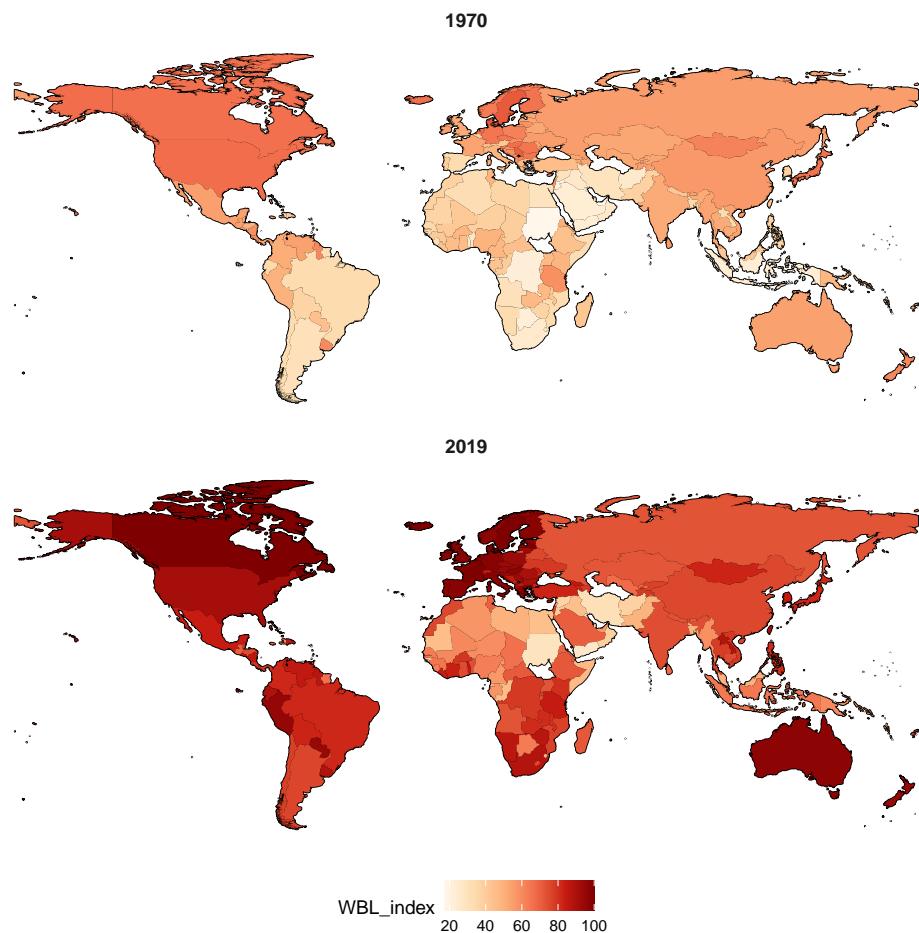


Figure B2. WBL index across countries (in 1970 and 2019).

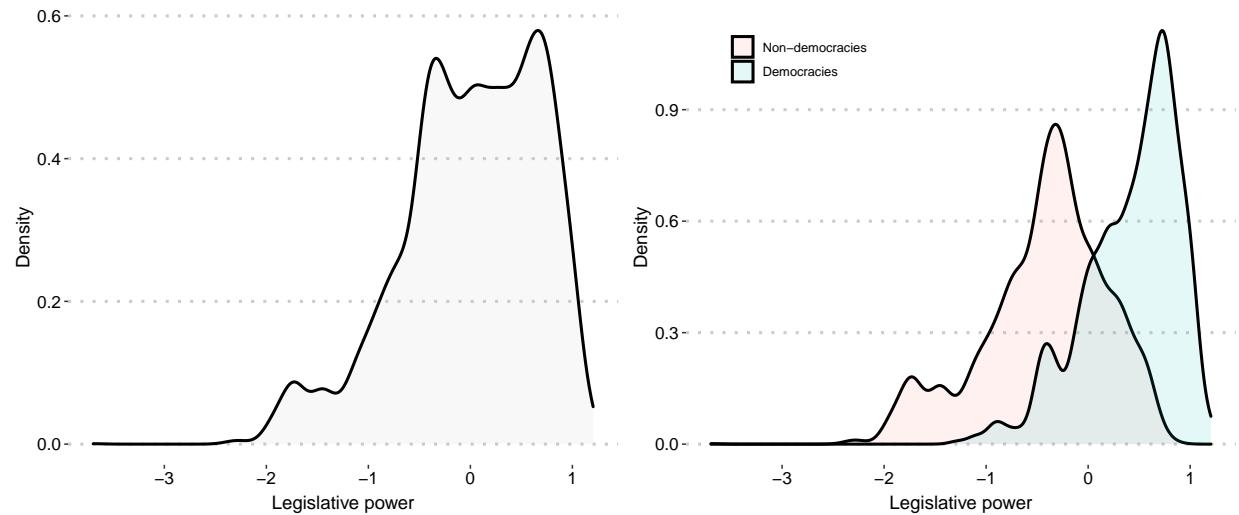


Figure B3. Distribution of the Legislative power index, 1970-2019.

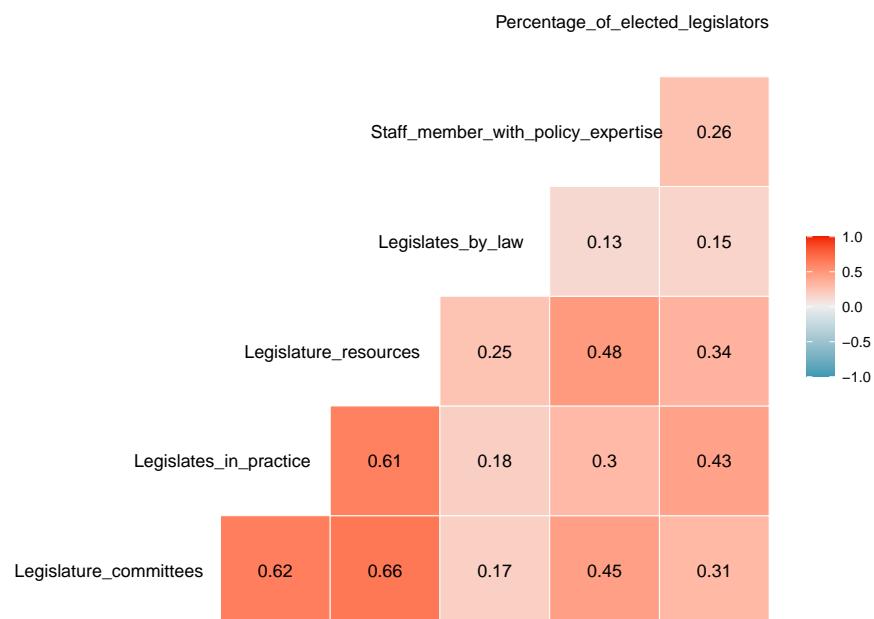


Figure B4. Correlations among sub-indicators of the Legislative power.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female legislators	0.290** (0.050)	0.296** (0.048)	0.239** (0.051)	0.231** (0.052)	0.137** (0.051)	0.248** (0.055)	0.247** (0.047)	0.226** (0.046)	0.016+ (0.009)
Female ministers	0.172** (0.032)	0.168** (0.031)	0.136** (0.034)	0.144** (0.033)	0.104** (0.029)	0.160** (0.033)	0.154** (0.032)	0.186** (0.036)	0.016** (0.006)
Electoral democracy index	0.079* (0.032)	0.045 (0.029)	0.096** (0.034)	0.085* (0.034)	0.066* (0.031)	0.094* (0.037)	0.047 (0.034)	0.070* (0.035)	0.020** (0.004)
GDP per capita (ln)	3.335** (1.005)	3.369** (0.998)	2.446* (1.222)	3.345** (1.256)	3.548* (1.632)	2.570* (1.030)	2.662* (1.115)	2.393* (1.021)	0.362* (0.161)
Oil rents per capita (ln)	-0.438 (0.266)	-0.536* (0.270)	-0.129 (0.302)	-0.433 (0.310)	-0.738* (0.332)	-0.413 (0.280)	-0.380 (0.264)	-0.431 (0.294)	-0.037 (0.044)
Communist	0.713 (3.029)	4.754 (3.042)	1.815 (3.374)	-0.152 (2.903)	6.718* (3.136)	1.869 (3.210)	-0.103 (2.941)	-2.690 (2.841)	0.070 (0.395)
Linear trend	0.361** (0.053)	0.355** (0.042)	0.280** (0.064)	0.459** (0.052)	0.621** (0.070)	0.488** (0.055)	0.445** (0.058)	0.387** (0.044)	0.039** (0.006)
Women civil society participation	0.037 (0.045)								
Women civil liberties		0.120** (0.045)							
Women's INGOs			0.102** (0.036)						
Leftist government				1.870** (0.625)					
Female labor participation					-0.028 (0.062)				
Fertility rate						1.199* (0.472)			
Female school enrollment							0.004 (0.034)		
Foreign aid per capita (ln)								-0.108 (0.683)	
Lagged Y									0.910** (0.007)
Constant	11.211 (8.605)	7.235 (8.348)	18.990+ (9.942)	11.334 (10.245)	9.887 (13.724)	12.993 (8.567)	20.091* (9.136)	20.813* (8.651)	0.631 (1.353)
H0: legislator = minister, p-value	0.05	0.03	0.09	0.16	0.59	0.16	0.12	0.52	0.98
Countries	156	156	142	152	154	148	144	124	156
Observations	5678	5678	4755	4818	3897	5362	4742	4058	5589
Within R ²	0.689	0.695	0.673	0.687	0.673	0.691	0.681	0.629	0.950

Table A3. Controlling for additional potential confounders (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

The central finding remains unaltered when I add a time-varying control variable to the baseline model specification. The additional control variables include women's civil liberties, women civil society participation, the annual number of women's international non-government organizations, leftist governments, female labor market participation, the level of female education, fertility rate, a natural log of official development assistance per capita. and the a lagged dependent variable. Among them, women's civil liberties (=0.648) and women's civil society participation (=0.713) highly correlate with the WBL index.

	(1) Mobility	(2) Workplace	(3) Pay	(4) Marriage	(5) Parenthood	(6) Entrepreneurship	(7) Assets	(8) Pension
Female legislators	0.114* (0.053)	0.520** (0.125)	0.433** (0.100)	0.267** (0.083)	0.294** (0.111)	0.258* (0.136)	0.232* (0.116)	0.125 (0.114)
Female ministers	0.047 (0.037)	0.297** (0.094)	0.221* (0.091)	0.149** (0.049)	0.091 (0.063)	0.272** (0.095)	0.023 (0.058)	0.203* (0.084)
Female legislators × Legislative power	0.090 (0.069)	0.619** (0.155)	0.201 (0.133)	0.181 (0.111)	0.446** (0.129)	0.322* (0.151)	0.016 (0.124)	-0.162 (0.161)
Female ministers × Legislative power	-0.095* (0.053)	0.047 (0.128)	-0.030 (0.132)	0.075 (0.085)	0.016 (0.104)	-0.296* (0.147)	-0.093 (0.072)	-0.117 (0.122)
Legislative power	1.337 (2.080)	-2.116 (3.655)	-0.801 (2.592)	-1.949 (2.534)	-3.406 (2.258)	-0.449 (4.032)	-2.961 (3.528)	3.425 (3.381)
Electoral democracy index	0.050 (0.038)	0.130 (0.085)	0.132 (0.088)	0.114* (0.052)	0.022 (0.059)	0.155 (0.099)	0.262** (0.089)	-0.108 (0.066)
GDP per capita (ln)	1.335 (1.038)	7.174* (2.799)	5.626* (2.440)	5.476** (1.666)	3.706 (2.624)	-0.578 (2.186)	0.704 (2.211)	1.192 (3.145)
Oil rents per capita (ln)	-0.365 (0.255)	-1.106 (0.704)	-1.550** (0.581)	-0.652 (0.434)	1.601** (0.580)	-0.045 (0.578)	-1.298** (0.476)	0.157 (0.686)
Communist	7.678** (2.110)	2.701 (7.264)	3.155 (5.160)	7.024* (3.103)	-5.808 (4.654)	7.681* (4.359)	13.342** (4.336)	-5.893 (7.949)
Linear trend	0.140** (0.048)	0.915** (0.114)	0.289** (0.074)	0.277** (0.065)	0.529** (0.085)	0.148* (0.086)	0.265** (0.072)	0.397** (0.109)
Constant	64.938** (9.159)	-59.672** (22.785)	-20.583 (20.133)	-4.278 (14.305)	-19.368 (22.681)	59.538** (17.565)	50.633** (18.214)	44.868 ⁺ (26.153)
Countries	156	156	156	156	156	156	156	156
Observations	5678	5678	5678	5678	5678	5678	5678	5678
Within R ²	0.230	0.581	0.383	0.455	0.509	0.235	0.291	0.187

Table A4. Exploring the interaction between women's descriptive representation and legislative power using sub-indicators for WBL index (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

	(1) Mobility	(2) Workplace	(3) Pay	(4) Marriage	(5) Parenthood	(6) Entrepreneurship	(7) Assets	(8) Pension
Female legislators	-0.063 (0.087)	-0.018 (0.209)	0.324* (0.182)	0.149 (0.152)	-0.375* (0.144)	-0.064 (0.182)	0.346 (0.221)	0.188 (0.228)
Female ministers	0.087 (0.077)	0.034 (0.193)	0.041 (0.165)	0.003 (0.120)	-0.012 (0.124)	0.355* (0.172)	0.059 (0.119)	0.038 (0.129)
Female legislators × Democracy	0.003* (0.002)	0.011** (0.003)	0.002 (0.003)	0.002 (0.003)	0.013** (0.003)	0.006* (0.003)	-0.002 (0.003)	-0.002 (0.004)
Female ministers × Democracy	-0.001 (0.001)	0.004 (0.003)	0.003 (0.002)	0.003 (0.002)	0.001 (0.002)	-0.003 (0.002)	-0.001 (0.002)	0.002 (0.002)
Electoral democracy index	0.051 (0.043)	0.056 (0.074)	0.109 (0.079)	0.077 (0.052)	-0.088 (0.063)	0.127 ⁺ (0.076)	0.239** (0.064)	-0.076 (0.054)
GDP per capita (ln)	1.185 (1.011)	6.691* (2.878)	5.233* (2.428)	5.294** (1.655)	3.117 (2.695)	-0.997 (2.186)	0.639 (2.273)	0.595 (3.119)
Oil rents per capita (ln)	-0.298 (0.251)	-1.000 (0.705)	-1.495** (0.570)	-0.638 (0.438)	1.755** (0.556)	0.065 (0.577)	-1.336** (0.482)	0.276 (0.677)
Communist	8.348** (2.048)	0.642 (7.594)	1.993 (5.605)	6.212 ⁺ (3.204)	-3.287 (4.712)	8.004 ⁺ (4.191)	13.088** (4.252)	-4.817 (7.767)
Linear trend	0.153** (0.045)	0.972** (0.112)	0.314** (0.070)	0.291** (0.061)	0.558** (0.084)	0.169 ⁺ (0.092)	0.248** (0.076)	0.417** (0.109)
Constant	65.906** (8.966)	-52.749* (23.681)	-16.374 (20.157)	-1.080 (14.123)	-9.651 (23.051)	64.076** (17.313)	52.568** (19.028)	48.181 ⁺ (25.566)
Countries	156	156	156	156	156	156	156	156
Observations	5678	5678	5678	5678	5678	5678	5678	5678
Within R ²	0.231	0.578	0.384	0.453	0.520	0.231	0.289	0.181

Table A5. Exploring the interaction between women's descriptive representation and democracy using sub-indicators for WBL index (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

	(1)	(2)	(3)	(4)	Legislative strength	Democracy level		
	(5)	(6)		(7)	(8)			
Gender quota	4.282** (1.308)	3.672** (1.265)	3.256* (1.294)	2.746 ⁺ (1.646)	3.286* (1.587)	4.655** (1.682)	2.598 (1.914)	5.404** (1.414)
Gender quota × Legislative power				2.844 (2.123)				
Legislative power				-0.672 (1.965)				
Gender quota × Democracy				0.026 (0.034)				
Electoral democracy index	0.077* (0.039)	0.085 ⁺ (0.051)	0.077 ⁺ (0.039)	0.056 (0.049)	0.074* (0.035)	0.142* (0.070)	0.057 ⁺ (0.030)	
GDP per capita (ln)	2.989* (1.192)	2.966* (1.173)	2.979* (1.186)	1.982 (1.358)	5.557** (1.627)	0.917 (1.330)	6.157** (1.528)	
Oil rents per capita (ln)	-0.363 (0.332)	-0.348 (0.333)	-0.357 (0.332)	-0.633 ⁺ (0.349)	0.127 (0.412)	-0.164 (0.482)	0.099 (0.303)	
Communist	6.738** (2.511)	6.470* (2.681)	6.736** (2.532)	1.525 (2.748)	9.782** (2.910)	0.013 (2.978)	9.546** (2.334)	
Linear trend	0.635** (0.032)	0.561** (0.037)	0.562** (0.038)	0.561** (0.037)	0.478** (0.050)	0.569** (0.042)	0.409** (0.049)	0.567** (0.044)
Constant	43.473** (0.805)	15.757 (9.675)	15.575 (9.461)	15.859 (9.622)	23.166* (10.744)	-7.145 (13.871)	29.050** (9.713)	-10.955 (13.385)
Countries	155	155	155	155	78	125	77	131
Observations	5633	5633	5633	5633	2776	3656	2732	3699
Within R^2	0.637	0.649	0.651	0.650	0.579	0.697	0.554	0.728

Table A6. Gender quotas and legal gender equality (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. $+p < 0.1$, $*p < 0.05$, $**p < 0.01$.

We explore the effect of legislative gender quotas on legal gender equality. If women's legislative representation matters for legal gender equality, the same might be said of legislative gender quotas that increases the proportion of women in legislatures. Additionally, the effect of gender quotas will increase in the degree of legislative power and the level of democracy. To test these expectations, we use the information on legislative gender quotas from the V-Dem data. We construct a dummy for quotas that is coded one if a country has a national-level gender quota that either reserves national legislative seats or mandates candidate nominations for women through statutory law. Table A6 and Figure B4 show that the relationship between gender quota and legal gender equality is positive and statistically significant and that it is strengthened by the levels of democracy or legislative power. These results fit well with our main findings.

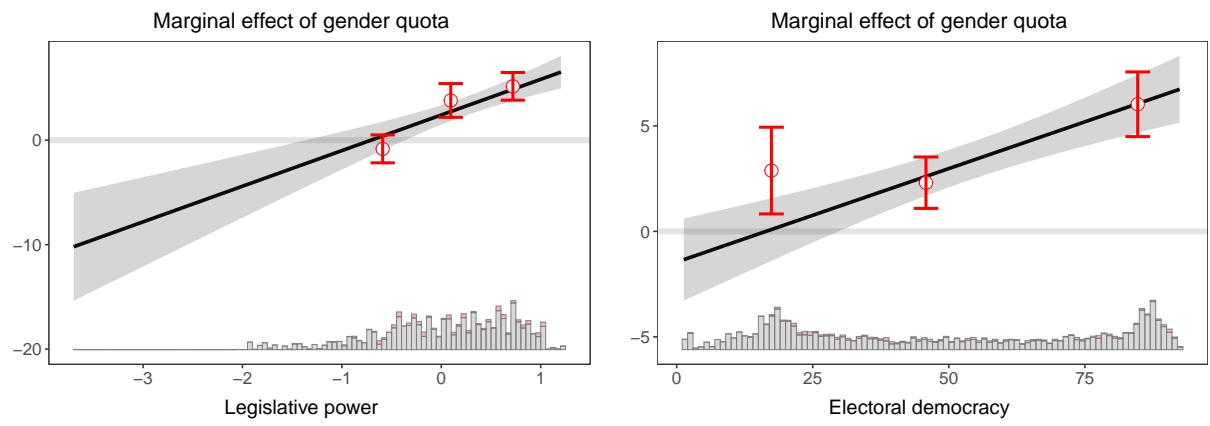


Figure B5. Conditional effects of gender quota on WBL index. Solid lines (or dots) display the estimate of the marginal effect, while shaded areas (or vertical lines) display the 95% confidence intervals. The red vertical lines present the marginal effect estimates from the binning estimator.

	No trend			Two-way FE			Cubic trends			Region-specific trends		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female legislators	0.476** (0.049)	0.458** (0.046)	0.201* (0.086)	0.253** (0.057)	0.239** (0.055)	-0.005 (0.092)	0.258** (0.056)	0.244** (0.054)	0.005 (0.091)	0.235** (0.054)	0.234** (0.052)	0.140 (0.086)
Female ministers	0.310** (0.031)	0.311** (0.032)	0.370** (0.073)	0.162** (0.032)	0.151** (0.033)	0.060 (0.066)	0.164** (0.032)	0.154** (0.033)	0.061 (0.065)	0.096** (0.033)	0.114** (0.033)	0.072 (0.063)
Female legislators × Legislative power	0.274** (0.064)			0.218** (0.060)			0.215** (0.060)				0.125** (0.070)	
Female ministers × Legislative power		-0.138** (0.050)		-0.054 (0.046)			-0.054 (0.046)		-0.056 (0.046)	-0.056 (0.046)	-0.092** (0.044)	
Legislative power	1.260 (1.576)			-0.842 (1.739)			-0.860 (1.725)		-0.860 (1.725)	-0.860 (1.725)	-0.031 (1.750)	
Female legislators × Democracy	0.005** (0.001)			0.005** (0.001)			0.005** (0.001)		0.005** (0.001)	0.005** (0.001)	0.002 (0.002)	
Female ministers × Democracy		-0.002 (0.001)		0.001 (0.001)			0.001 (0.001)		0.001 (0.001)	0.001 (0.001)	0.000 (0.001)	
Electoral democracy index	0.188** (0.031)	0.150** (0.039)	0.156** (0.034)	0.104** (0.034)	0.101* (0.041)	0.067 ⁺ (0.036)	0.103** (0.034)	0.100* (0.041)	0.066 ⁺ (0.035)	0.102** (0.031)	0.097* (0.040)	0.084* (0.035)
GDP per capita (ln)	7.165** (1.048)	6.806** (1.056)	6.972** (1.055)	2.692** (0.997)	2.517 [*] (0.982)	2.110 [*] (0.971)	2.779** (0.998)	2.626** (0.984)	2.212 [*] (0.974)	2.860 [*] (1.129)	3.008** (1.129)	2.830 [*] (1.113)
Oil rents per capita (ln)	-0.222 (0.287)	-0.222 (0.298)	-0.139 (0.283)	-0.517 ⁺ (0.282)	-0.479 ⁺ (0.278)	-0.404 (0.265)	-0.461 ⁺ (0.268)	-0.419 (0.265)	-0.344 (0.252)	-0.402 (0.266)	-0.419 (0.272)	-0.388 (0.263)
Communist	-3.110 (4.182)	1.173 (3.638)	0.127 (4.086)	1.460 (3.048)	4.370 (2.899)	4.619 (3.020)	1.427 (3.044)	4.270 (2.896)	4.512 (3.015)	8.174 [*] (3.289)	9.685 ^{**} (3.243)	9.239 ^{**} (3.239)
Linear trend							0.353 [*] (0.147)	0.368 [*] (0.148)	0.413 ^{**} (0.147)			
Squared trend							-0.005 (0.007)	-0.006 (0.007)	-0.008 (0.007)			
Cubed trend							0.000 (0.000)	0.000 ⁺ (0.000)	0.000 ⁺ (0.000)			
Constant	-20.595* (8.684)	-15.798 ⁺ (8.837)	-17.596 [*] (8.817)	27.839** (8.580)	29.293** (8.377)	34.692** (8.433)	18.006 [*] (8.319)	19.393 [*] (8.114)	24.247 [*] (8.196)	26.667 ^{**} (9.525)	25.425 ^{**} (9.575)	27.659 ^{**} (9.457)
H0: legislator = minister, p-value	0.02	0.02	0.16	0.16	0.16	0.59	0.15	0.65	0.01	0.03	0.53	
Countries	156	156	156	156	156	156	156	156	156	156	156	
Observations	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	

Table A7. Alternative modeling for time trends (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses.
+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

The relationship between women's descriptive representation and legal gender equality may merely reflect global temporal dynamics involving the simultaneous growth of both variables. In a context of evolving global norms regarding gender equality in recent decades, countries have been exposed to external pressures for advancing women's equality in politics and economic opportunity. To mitigate this concern, the baseline specifications include a linear time trend. Alternatively, Columns 4-6 of Table A7 include a full set of year fixed effects to capture common shocks over time; Columns 7-9 linear, quadratic, and cubic time trends to control for nonlinear time trends; and Columns 10-12 region-specific time trends by allowing linear trends to vary by region. The result shows that the positive effects of female legislators and cabinet members are robust to these alternative modeling strategies and are similar to the main benchmark estimates. We also find that estimation results are qualitatively similar to other estimates when we exclude the time trend variable in Columns 1-3, although the estimates for female legislators and cabinet members and their interaction terms are larger in magnitude than those from the models accounting for time trends.

	(1)	(2)	(3)
Female legislators	0.302** (0.050)	0.292** (0.048)	0.075 (0.083)
Female ministers	0.173** (0.031)	0.164** (0.032)	0.078 (0.065)
Female legislators × Legislative power		0.209** (0.059)	
Female ministers × Legislative power		-0.059 (0.045)	
Legislative power		-0.245 (1.594)	
Female legislators × Democracy			0.004** (0.001)
Female ministers × Democracy			0.001 (0.001)
Electoral democracy index	0.111** (0.031)	0.101** (0.039)	0.076* (0.033)
GDP per capita (ln)	3.194** (0.848)	2.993** (0.847)	2.695** (0.846)
Oil rents per capita (ln)	-0.548* (0.245)	-0.517* (0.243)	-0.442 ⁺ (0.234)
Communist	1.614 (3.031)	4.520 (2.806)	4.374 (2.960)
Linear trend	0.370** (0.040)	0.359** (0.040)	0.381** (0.039)
Constant	12.754 ⁺ (6.711)	15.062* (6.647)	18.449** (6.762)
H0: legislator = minister, p-value	0.03	0.03	0.98
Countries	156	156	156
Observations	5678	5678	5678

Table A8. Random-effects estimates. Robust standard errors clustered at the country level are in parentheses.
+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

We estimate random-effects models, which capture a weighted average of within-effects and between-effects. The random-effect estimates presented in Table A8 are similar to the main fixed-effect estimates.

	Driscoll and Kraay				Two-way clustering			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female legislators	0.236** (0.029)	0.292** (0.032)	0.280** (0.033)	0.061 (0.042)	0.273** (0.055)	0.292** (0.052)	0.280** (0.050)	0.061 (0.083)
Female ministers	0.164** (0.016)	0.171** (0.017)	0.163** (0.016)	0.076* (0.037)	0.162** (0.034)	0.171** (0.031)	0.163** (0.031)	0.076 (0.063)
Female legislators × Legislative power				0.214** (0.041)			0.214** (0.061)	
Female ministers × Legislative power				-0.062** (0.015)			-0.062 (0.043)	
Legislative power				-0.876 (0.643)			-0.876 (1.664)	
Female legislators × Democracy					0.004** (0.001)			0.004** (0.001)
Female ministers × Democracy					0.001+ (0.001)			0.001 (0.001)
Electoral democracy index	0.097** (0.018)	0.095** (0.018)	0.062** (0.015)		0.097** (0.033)	0.095* (0.040)		0.062* (0.034)
GDP per capita (ln)	3.201** (0.743)	3.076** (0.709)	2.716** (0.738)		3.201** (1.033)	3.076** (1.017)		2.716* (1.020)
Oil rents per capita (ln)	-0.449* (0.200)	-0.407* (0.202)	-0.334 (0.199)		-0.449 (0.276)	-0.407 (0.273)		-0.334 (0.264)
Communist	0.960 (1.719)	3.744+ (2.058)	3.785+ (2.087)		0.960 (3.130)	3.744 (3.043)		3.785 (3.132)
Linear trend	0.506** (0.029)	0.380** (0.036)	0.370** (0.035)	0.390** (0.031)	0.498** (0.041)	0.380** (0.046)	0.370** (0.046)	0.390** (0.044)
Constant	42.714** (0.456)	13.322* (6.111)	14.545* (5.664)	18.906** (5.939)	42.726** (0.791)	13.322 (8.379)	14.545+ (8.180)	18.906* (8.327)
H0: legislator = minister, p-value	0.01	0.00	0.01	0.83	0.09	0.05	0.06	0.90
Countries					45	45	45	45
Observations	6404	5678	5678	5678	5678	5678	5678	5678

Table A9. Alternative robust standard errors (fixed effects OLS estimates). + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

Next, we use either the Driscoll-Kraay standard errors that are robust to autocorrelation, heteroscedasticity, and cross-sectional dependence or robust standard errors adjusted for two-way clustering at the county and year level to control for contemporaneous correlations. Our central findings remain unaltered.

	1-year						2-year						3-year						4-year						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)										
Female legislators	0.275** (0.050)	0.265** (0.049)	0.080 (0.086)	0.258** (0.050)	0.250** (0.049)	0.110 (0.087)	0.239** (0.049)	0.234** (0.048)	0.127 (0.087)	0.224** (0.048)	0.141 (0.047)	0.204** (0.048)	0.164** (0.088)												
Female ministers	0.173** (0.031)	0.164** (0.033)	0.073 (0.063)	0.175** (0.030)	0.165** (0.034)	0.068 (0.063)	0.172** (0.031)	0.165** (0.036)	0.069 (0.065)	0.159** (0.030)	0.152** (0.036)	0.058 (0.067)	0.141** (0.031)	0.137** (0.038)	0.044 (0.069)										
Female legislators × Legislative power	0.178** (0.061)			0.140* (0.062)			0.106* (0.063)			0.106* (0.064)			0.073 (0.064)			0.025 (0.065)									
Female ministers × Legislative power	-0.043 (0.046)			-0.027 (0.048)			-0.020 (0.051)			-0.020 (0.053)			-0.008 (0.051)			0.002 (0.055)									
Legislative power	-0.621 (1.675)			-0.250 (1.674)			-0.017 (1.670)			-0.017 (1.645)			0.111 (1.645)			0.430 (1.651)									
Female legislators × Democracy	0.004* (0.001)			0.003 ⁺ (0.001)			0.002 (0.001)			0.002 (0.001)			0.001 (0.001)			0.001 (0.002)								0.001 (0.002)	
Female ministers × Democracy	0.001 (0.001)			0.001 (0.001)			0.001 (0.001)			0.001 (0.001)			0.001 (0.001)			0.001 (0.001)								0.001 (0.001)	
Electoral democracy index	0.107** (0.033)	0.103* (0.041)	0.076* (0.035)	0.116** (0.033)	0.110* (0.042)	0.091** (0.035)	0.125** (0.033)	0.118** (0.042)	0.105** (0.035)	0.134** (0.032)	0.128** (0.042)	0.118** (0.034)	0.135** (0.031)	0.127** (0.041)	0.124** (0.033)										
GDP per capita (ln)	3.323** (0.996)	3.191** (0.994)	2.868** (0.985)	3.439** (1.005)	3.308** (1.010)	3.025** (0.998)	3.443** (1.030)	3.337** (1.044)	3.079** (1.027)	3.351** (1.043)	3.258** (1.062)	3.025** (1.043)	3.190** (1.071)	3.132** (1.080)	2.924** (1.080)										
Oil rents per capita (ln)	-0.470 ⁺ (0.267)	-0.431 (0.264)	-0.366 (0.255)	-0.515 ⁺ (0.269)	-0.483 ⁺ (0.267)	-0.427 ⁺ (0.258)	-0.542 [*] (0.263)	-0.519 ⁺ (0.263)	-0.427 ⁺ (0.253)	-0.542 [*] (0.253)	-0.587 [*] (0.254)	-0.569 [*] (0.254)	-0.524 [*] (0.255)	-0.638** (0.245)	-0.631 [*] (0.244)	-0.638** (0.248)									
Communist	1.023 (3.114)	3.413 (2.990)	3.413 (3.049)	1.030 (3.179)	3.012 (3.082)	2.860 (3.108)	2.900 (3.213)	2.453 (3.153)	2.305 (3.162)	2.305 (3.162)	0.878 (3.138)	2.004 (3.138)	1.939 (3.120)	0.639 (3.066)	1.162 (3.094)										
Linear trend	0.387** (0.042)	0.378** (0.043)	0.397** (0.042)	0.391** (0.043)	0.384** (0.043)	0.401** (0.041)	0.401** (0.042)	0.394** (0.042)	0.410** (0.042)	0.415** (0.043)	0.410** (0.043)	0.424** (0.043)	0.439** (0.043)	0.436** (0.045)	0.447** (0.044)										
Constant	12.530 (8.070)	13.867 ⁺ (8.014)	17.664* (8.084)	11.923 (8.128)	13.378 (8.123)	16.470 [*] (8.179)	12.242 (8.347)	13.524 (8.438)	16.166 ⁺ (8.446)	13.348 (8.475)	14.488 ⁺ (8.633)	16.788 ⁺ (8.602)	15.400 ⁺ (8.710)	16.287 ⁺ (8.942)	18.093 [*] (8.908)										
H0: legislator = minister, p-value	0.10 156	0.10 156	0.95 156	0.18 156	0.72 156	0.72 156	0.28 156	0.63 156	0.28 156	0.28 156	0.28 156	0.50 156	0.29 156	0.30 156	0.34 156										
Countries	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678	5678										
Observations	696	701	703	706	709	710	712	714	715	718	719	720	720	720	721										
Within R ²																									

Table A10. Alternative lag structures (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

We did not lag our independent variables to capture the instant effect of women's descriptive representation on legal gender equality. However, the time before the effect of women's descriptive representation actualizes is not clear. Thus, we lag right-side variables and vary the lags from 1 to 5 years. Table A10 shows that our results are highly robust to alternative time-lag specifications.

	No high-income OECD			Democracies			Non-democracies		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female legislators	0.270** (0.056)	0.276** (0.055)	0.119 (0.096)	0.190** (0.071)	0.049 (0.087)	-0.274 (0.183)	0.235** (0.059)	0.264** (0.080)	0.300* (0.146)
Female ministers	0.201** (0.040)	0.191** (0.039)	0.025 (0.077)	0.084* (0.035)	0.219** (0.052)	0.225+ (0.135)	0.139** (0.041)	0.219** (0.061)	-0.115 (0.129)
Female legislators × Legislative power		0.152* (0.073)			0.276* (0.118)			0.051 (0.102)	
Female ministers × Legislative power		-0.003 (0.063)			-0.257** (0.074)			0.166 (0.122)	
Legislative power		-2.187 (1.641)			0.198 (3.093)			-0.223 (1.788)	
Female legislators × Democracy			0.003 (0.002)			0.006* (0.003)			-0.003 (0.005)
Female ministers × Democracy			0.003+ (0.002)			-0.002 (0.002)			0.010* (0.005)
Electoral democracy index	0.101** (0.035)	0.107* (0.045)	0.042 (0.043)	0.051 (0.046)	0.040 (0.052)	0.019 (0.050)	0.113+ (0.060)	0.087 (0.076)	0.062 (0.099)
GDP per capita (ln)	2.568* (0.996)	2.446* (0.997)	1.978* (0.967)	4.806* (2.362)	5.076* (2.406)	5.036* (2.304)	0.609 (1.088)	0.468 (1.032)	0.560 (1.076)
Oil rents per capita (ln)	-0.350 (0.318)	-0.314 (0.310)	-0.258 (0.296)	-0.312 (0.342)	-0.332 (0.343)	-0.279 (0.335)	-0.228 (0.285)	-0.196 (0.288)	-0.198 (0.282)
Communist	-2.739 (3.058)	-1.360 (3.200)	-1.350 (2.932)	5.155* (2.513)	5.404* (2.529)	7.544** (2.498)	-4.532* (2.026)	-4.031+ (2.336)	-4.907* (1.990)
Linear trend	0.332** (0.044)	0.342** (0.043)	0.357** (0.041)	0.567** (0.088)	0.559** (0.090)	0.557** (0.086)	0.305** (0.047)	0.297** (0.046)	0.307** (0.046)
Constant	17.732* (7.630)	17.979* (7.690)	24.411** (7.626)	2.015 (19.799)	0.390 (20.155)	2.416 (19.283)	33.182** (8.394)	34.737** (8.262)	34.567** (8.798)
Countries	124	124	124	106	106	106	107	107	107
Observations	4372	4372	4372	2925	2925	2925	2676	2676	2676
Within R^2	0.640	0.645	0.649	0.750	0.754	0.753	0.526	0.531	0.535

Table A11. Using split samples (fixed effects OLS estimates). The panels contain observations at each period. Robust standard errors clustered at the country level are in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

We examine whether our results are robust to different sub-samples. First, we first remove high-income OECD countries from the sample whether our main results are driven by them.* These countries tend to have higher equality of economic opportunity across gender as well as higher levels of female descriptive representation, legislative power, and democracy. Second, we split the sample between democracies and non-democracies by using a dichotomous measure of democracy. When we exclude high-income OECD countries or limit our analyses to democratic countries, the estimation results are similar to those based on the full sample. One significant difference is that Female ministers × Legislative power is not statistically significant. However, when we restrict our analyses to non-democratic countries, no interaction terms are statistically significant, although both female legislators and ministers are positively associated with the WBL index.

*We use the World Bank's definition of high-income OECD economies: OECD members whose gross national income per capita is greater than US\$12,696 in 2020. There are 32 high-income OECD countries.

	(1) East Europe & Central Asia	(2) Latin America & the Caribbean	(3) Middle East & North Africa	(4) Sub-Saharan Africa	(5) West	(6) East Asia & Pacific	(7) South Asia
Female legislators	0.336** (0.053)	0.328** (0.053)	0.294** (0.050)	0.278** (0.057)	0.257** (0.050)	0.280** (0.048)	0.285** (0.051)
Female ministers	0.170** (0.033)	0.196** (0.036)	0.148** (0.031)	0.164** (0.033)	0.174** (0.035)	0.175** (0.031)	0.134** (0.032)
Controls	✓	✓	✓	✓	✓	✓	✓
Countries	128	134	139	112	132	151	140
Observations	4925	4807	5094	4089	4625	5470	5058
Within R ²	0.705	0.694	0.711	0.706	0.647	0.691	0.711
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Female legislators	0.320** (0.050)	0.336** (0.048)	0.273** (0.047)	0.216** (0.057)	0.263** (0.049)	0.267** (0.045)	0.265** (0.048)
Female ministers	0.159** (0.032)	0.164** (0.036)	0.141** (0.032)	0.166** (0.032)	0.164** (0.033)	0.157** (0.031)	0.128** (0.035)
Female legislators × Legislative power	0.199** (0.062)	0.263** (0.059)	0.210** (0.061)	0.271** (0.070)	0.190** (0.066)	0.203** (0.056)	0.204** (0.057)
Female ministers × Legislative power	-0.058 (0.047)	-0.033 (0.051)	-0.055 (0.046)	-0.087* (0.043)	-0.021 (0.056)	-0.037 (0.045)	-0.052 (0.052)
Legislative power	-1.759 (1.738)	-0.453 (1.665)	-1.836 (1.841)	-2.071 (2.118)	-2.368 (1.544)	-1.624 (1.650)	-1.543 (1.688)
Controls	✓	✓	✓	✓	✓	✓	✓
Countries	128	134	139	112	132	151	140
Observations	4925	4807	5094	4089	4625	5470	5058
Within R ²	0.710	0.706	0.716	0.715	0.653	0.697	0.716
	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Female legislators	0.070 (0.091)	0.040 (0.080)	0.037 (0.085)	-0.066 (0.125)	0.076 (0.087)	0.034 (0.080)	0.022 (0.070)
Female ministers	0.077 (0.063)	0.057 (0.060)	0.048 (0.068)	0.084 (0.076)	0.030 (0.069)	0.032 (0.063)	-0.011 (0.076)
Female legislators × Democracy	0.005** (0.002)	0.006** (0.001)	0.005** (0.002)	0.006** (0.002)	0.004* (0.002)	0.005** (0.001)	0.005** (0.001)
Female ministers × Democracy	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)	0.002 ⁺ (0.001)	0.002 (0.001)	0.002 (0.001)
Controls	✓	✓	✓	✓	✓	✓	✓
Countries	128	134	139	112	132	151	140
Observations	4925	4807	5094	4089	4625	5470	5058
Within R ²	0.714	0.709	0.719	0.717	0.655	0.702	0.722

Table A12. Dropping each region (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. All models include the baseline set of control variables. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

We examine whether our results are sensitive to the exclusion of a particular region. We use the World Bank's region classification.[†] As Table A12 presents, our results are highly robust to the exclusion of a particular region.

[†]It includes East Asia and Pacific, Eastern Europe and Central Asia, Latin America and the Caribbean, North America, Middle East and North Africa, South Asia, and sub-Saharan Africa.

	(1)	(2)	(3)	(4)	(5)	(6)
Female legislators	0.207** (0.058)	0.260** (0.047)	0.272** (0.047)	0.161 (0.101)	0.290** (0.050)	0.073 (0.149)
Female ministers	0.177** (0.037)	0.148** (0.034)	0.146** (0.036)	0.281** (0.073)	0.174** (0.032)	0.104 (0.153)
Female legislators × Legislature committees	0.092** (0.033)					
Female ministers × Legislature committees	-0.025 (0.021)					
Legislature committees	-0.205 (0.716)					
Female legislators × Legislate in practice		0.103** (0.031)				
Female ministers × Legislate in practice		0.003 (0.027)				
Legislates in practice		-1.071 (0.772)				
Female legislators × Legislature resources			0.076* (0.032)			
Female ministers × Legislature resources			0.006 (0.026)			
Legislature resources			-0.499 (0.763)			
Female legislators × Legislate by law				0.177+ (0.103)		
Female ministers × Legislate by law				-0.144+ (0.078)		
Legislates by law				-0.763 (1.443)		
Female legislators × Policy staff					0.048+ (0.026)	
Female ministers × Policy staff					-0.030 (0.021)	
Staff member with policy expertise					0.360 (0.659)	
Female legislators × % of elected legislators						0.002 (0.002)
Female ministers × % of elected legislators						0.001 (0.002)
Percentage of elected legislators						-0.031 (0.030)
Control	✓	✓	✓	✓	✓	✓
Countries	156	156	156	156	156	156
Observations	5675	5675	5675	5665	5675	5677
Within R^2	0.692	0.695	0.693	0.691	0.690	0.689

Table A13. Using subindicators for legislative power (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

We use individual sub-indicators comprising the legislative power measure. We interact each legislative power sub-indicator with female legislators and ministers. All interaction terms with female legislators are positive and statistically significant. On the other hand, the sign for interaction terms with female ministers are not consistent, and most of them are not statistically significant. The results are congruent with the result presented in Column 1 of Table 4 in the main text.

	(1)	(2)	(3)	Democracy stock Low	Democracy stock High
	(4)	(5)			
Female legislators	0.257** (0.060)	0.225** (0.074)	0.210** (0.077)	0.214** (0.061)	0.317** (0.085)
Female ministers	0.193** (0.048)	0.176** (0.063)	0.172* (0.066)	0.145** (0.051)	0.131** (0.042)
Democracy stock (1%)	-0.026 (0.027)				
Female legislators × Democracy stock (1%)	0.003 (0.002)				
Female ministers × Democracy stock (1%)	-0.000 (0.002)				
Democracy stock (10%)		-0.089 (0.279)			
Female legislators × Democracy stock (10%)		0.023 (0.020)			
Female ministers × Democracy stock (10%)		0.002 (0.015)			
Democracy stock (20%)			0.342 (0.618)		
Female legislators × Democracy stock (20%)			0.050 (0.038)		
Female ministers × Democracy stock (20%)			0.005 (0.029)		
GDP per capita (ln)	2.911** (1.107)	2.800* (1.103)	2.766* (1.094)	2.063 ⁺ (1.216)	5.238** (1.869)
Oil rents per capita (ln)	-0.529 ⁺ (0.289)	-0.516 ⁺ (0.288)	-0.512 ⁺ (0.284)	-0.852* (0.344)	0.250 (0.391)
Communist	-1.210 (1.488)	-1.003 (1.427)	-0.570 (1.390)	-3.328 (3.948)	-0.539 (2.158)
Linear trend	0.435** (0.044)	0.438** (0.044)	0.435** (0.043)	0.424** (0.047)	0.454** (0.078)
Constant	19.148* (8.951)	19.970* (8.978)	19.534* (8.935)	23.470* (9.273)	-0.312 (16.201)
Countries	140	140	140	72	83
Observations	4736	4736	4736	2618	3051
Within R ²	0.681	0.682	0.683	0.589	0.745

Table A14. Using democracy stock variable instead of democracy level (fixed effects OLS estimates). Robust standard errors clustered at the country level are in parentheses. All models include the baseline set of control variables. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

References

- Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I Lindberg, Jan Teorell, David Altman, Michael Bernhard, M Steven Fish, Adam Glynn, Allen Hicken et al. 2020. “V-Dem Codebook v10.” <https://www.v-dem.net/en/data/data-version-10/>: Forthcoming.
- Cruz, Cesi, Philip Keefer, and Carlos Scartascini. 2018. *Database of Political Institutions 2017*. Washington, DC: Inter-American Development Bank Research Department.
- Feenstra, Robert C., Robert Inklaar, and Marcel P. Timmer. 2015. “The Next Generation of the Penn World Table.” *American Economic Review* 105(10): 3150–3182.
- Hughes, Melanie M. Paxton, Pamela, Sharon Quinsaat, and Nichola Reith. 2017. *Women’s International Nongovernmental Organizations, 1950-2013*. Women’s International Nongovernmental Organizations, 1950-2013. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], <https://doi.org/10.3886/E100514V1>.
- Nyrup, Jacob, and Stuart Bramwell. 2020. “Who Governs? A New Global Dataset on Members of Cabinets.” *American Political Science Review* 114(4): 1366–1374.
- Ross, Michael, and Paasha Mahdavi. 2015. “Oil and Gas Data, 1932-2014.” Harvard Dataverse.
- World Bank. 2019. “World Development Indicators.” <http://data.worldbank.org/> Accessed June 17.