Supplementary Materials: Appendix A

Country List and Descriptive Statistics of Key Variables

Country	Regime	Sample	Affective polarization (score)	Issue polarization (score)	Social media use (%)	Political participation (mean)	Vote (mean)	Political satisfaction (mean)	Perceived quality of democracy (mean)
Argentina	Flawed	1003	4	4	21%	1.33	2.79	5.41	7.01
Brazil	Flawed	1762	4	4	28%	1.41	2.63	2.59	3.70
Canada	Full	4018	1	1	52%	2.57	2.65	6.38	7.31
Chile	Flawed	1000	3	4	18%	0.77	2.30	5.48	6.79
Colombia	Flawed	1520	3	4	26%	1.57	2.42	3.81	5.24
Cyprus	Flawed	1000	3	2	25%	1.06	2.49	5.13	6.12
Czech Republic	Flawed	1200	2	2	21%	0.62	2.22	5.56	6.38
Germany	Full	1528	1	2	66%	2.68	2.77	6.34	7.58
Greece	Flawed	1200	2	3	20%	0.81	2.77	4.17	5.40
Indonesia	Flawed	3200	2	3	40%	0.60	2.79	6.11	7.33
Japan	Full	1353	1	1	20%	1.37	2.47	5.61	7.13
Malaysia	Flawed	1313	4	3	39%	1.53	2.25	5.38	6.06
Mongolia	Flawed	1638	2	2	21%	1.35	2.32	5.67	6.24
Netherlands	Full	2145	1	3	41%	1.53	2.72	5.73	7.10
New Zealand	Full	1057	0	1	46%	2.58	2.85	5.50	7.50
Peru	Flawed	1400	3	3	16%	0.42	2.85	3.78	5.45
Philippines	Flawed	1200	2	4	18%	0.79	2.76	6.35	6.92
Romania	Flawed	1257	3	3	11%	0.66	2.53	4.11	5.85
Serbia	Flawed	1046	2	4	12%	0.68	2.53	4.52	5.20
Singapore	Flawed	2012	2	1	24%	0.76	2.83	6.72	6.75
Slovakia	Flawed	1200	3	2	30%	0.88	2.42	4.46	5.47
South Korea	Full	1245	3	4	19%	0.54	2.63	6.78	6.88
Taiwan	Full	1223	1	3	25%	1.21	2.65	5.11	7.39
Thailand	Flawed	1500	4	4	24%	0.86	2.47	5.48	5.90
United Kingdom	Full	2609	3	2	49%	2.35	2.57	4.91	6.53
United States	Flawed	2596	4	4	61%	2.14	2.49	4.40	6.05
Uruguay	Full	1000	2	0	46%	1.95	2.90	6.21	7.76

Supplementary Materials: Appendix B

V-Dem Methodology

Like other cross-national datasets commonly used in comparative research, such as those from the *Polity Project*, *Freedom House*, *Reporters Without Borders*, and the *Global Party Survey*, among others, V-Dem is an expert-based survey where indicators representing concepts are coded by 'country experts' based on their evaluative judgements. This means the selection procedures of these experts are crucial to ensure the quality of data. V-Dem uses five selection criteria that are overseen by V-Dem Institute headquarters, regional managers, and country coordinators: (1) expertise in the country, (2) connection to the country (e.g., nationals or permanent residents), (3) willingness to devote time to the project, (4) impartiality, and (5) diversity in professional background, (e.g., academics, professionals etc.) Typically, five country experts code each cluster of indicators and then item response theory (IRT) modeling techniques are applied to generate a single "best estimate" score for each indicator.[1] V-Dem data has a well-regarded reputation, and it has been used by numerous researchers in such fields as communication, political science, and economics among others (Hunter, 2023).

Some scholars also noted the potential for "bias" in expert-based surveys and that "objective" individual-level representative surveys might provide a more accurate representation of reality (e.g., Little & Meng, 2023). Others countered this with the argument that representative surveys also rely on "human judgement" that could lead to bias (Knutsen et al., 2023). It is beyond the scope of this article to debate the relative merits and weaknesses of expert-based and representative surveys. We take the position that the concept precedes measurement and that expert-based indicators are valid representations of country-level phenomena. With regards to V-Dem measures of polarization, they have been applied in past

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[1] More comprehensive documentation is available at https://v-dem.net/documents/2/methodologyv12.pdf

studies to capture country-level dynamics on topics such as pernicious polarization and autocratization (Somer et al., 2021) and resilience to disinformation (Humprecht et al., 2020).

Comparing V-Dem With Other Cross-National Measures of Polarization

To further validate our V-Dem polarization measures we correlated them with other publicly available comparative data. The first is the country-level measure of *party system polarization* from the Bertelsmann Transformation Index (BTI), which is part of the Global State of Democracy Indices. The values ranged from 0 ("There is no party system to articulate and aggregate societal interest") to 10 ("The party system is stable and socially rooted: it is able to articulate and aggregate societal interest with low fragmentation, low voter volatility and low polarization"). As shown in Table S1 the relationships were moderately strong.

A popular dataset used in comparative politics to study affective polarization is the Comparative Study of Electoral Systems (CSES) survey that comprises individual-level representative survey data that is aggregated to form a measure of affective polarization (e.g., Boxell et al., 2020; Harteveld, 2021; Wagner, 2021). The survey does not have a question that was originally conceived to measure affective polarization. Instead, researchers adapted the level and extent of like and dislike of a political party to measure the concept.[2] To correlate the data, we downloaded the most recent CSES data for each country and calculated the measure of affective polarization using Wagner's (2021) unweighted "spread of like-dislike" scores. Larger spread is indicative of greater affective polarization. Correlations in Table S1 indicated no relationship between the V-Dem and CSES measures. This was expected as our discussion of polarization measurement in the main manuscript (p. 8) already

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[2] The specific question is: "I'd like to know what you think about each of our political parties. After I read the name of a political party, please rate it on a scale from 0 to 10, where 0 means you strongly dislike that party and 10 means that you strongly like that party. If I come to a party you haven't heard of or you feel you do not know enough about, just say so. The first party is PARTY A." Then the question is repeated for other political parties.

noted that the CSES measure relies on measuring levels of like/dislike towards other *political parties*. This differs from V-Dem, which focuses more on partisan differences affecting social relationships. As noted by Wagner (2021): "What like-dislike scores do not capture is affect towards fellow or opposing partisans rather than parties" and "using like-dislike scores of parties tells us less than other measures about affective polarization as a manifestation of social identities" (p. 3). This is consistent with the previous comparisons of affective polarization measures in the US context by Druckman and Levendusky (2019) where they noted that: "when scholars use items that measure feelings toward 'parties,' they are capturing attitudes toward elites more than toward voters," (p. 120). As the V-Dem and CSES measure different facets of affective polarization, the lack of congruence between them can be expected and the findings in the present study should be interpreted with the specific conceptualization and operationalization of political polarization in mind.

Table S1

Comparison of V-Dem Polarization Indicators With Other Indices

	Affective polarization	Issue polarization	Party system polarization	Affective polarization
	V-Dem	V-Dem	BTI (Global State of Democracy Indices)	CSES
	2022	2022	2022	Various
Argentina	4	4	0.67	
Brazil	4	4	0.33	3.89 (2018)
Canada	1	1		4.42 (2019)
Chile	3	4	0.56	2.78 (2017)
Colombia	3	4	0.44	
Cyprus	3	2		
Czech Republic	2	2	0.67	
Germany	1	2		4.71 (2017)
Greece	2	3		4.42 (2015)
Indonesia	2	3	0.56	
Japan	1	1		3.24 (2017)
Malaysia	4	3	0.44	
Mongolia	2	2	0.56	
Netherlands	1	3		
New Zealand	0	1		3.99 (2020)
Peru	3	3	0.33	
Philippines	2	4	0.33	
Romania	3	3	0.67	
Serbia	2	4	0.44	
Singapore	2	1	0.67	
Slovakia	3	2	0.56	5.01 (2020)
South Korea	3	4	0.56	2.95 (2016)
Taiwan	1	3	0.89	2.91 (2020)
Thailand	4	4	0.22	3.72 (2019)
United Kingdom	3	2		
United States	4	4		5.56 (2020)
Uruguay	2	0	1	5.56 (2019)
Correlation				
V-DEM (Affect)			r = -.68, p < .01	r = -.28, p = .34
V-DEM (Issue)			r = -.54, p <. 05	r = -.32, p = .26

Note: For Global State of Democracy Indices, the values were standardized, and lower values indicated greater polarization.

Supplementary Materials: Appendix C

Data sources for country-level control variables

Variable	Data sources and notes
Population	Based on "World Population Prospects 2022" from the United Nations Population Division – Department of Economic and Social Affairs. URL: https://population.un.org/wpp/Download/Standard/MostUsed/ File: WPP2022_GEN_F01_DEMOGRAPHIC_INDICATORS_COMPACT_REV1.xlsx
Gross domestic product	Based on World Bank and OECD national data. Figures are in US$. URL: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD File: API_NY.GDP.MKTP.CD_DS2_en_excel_v2_4770502.xls
Human development index	Based on the "2020 Human Development Report" from the United Nations Development Programme, the HDI aims "at capturing the complex interactions between people and ecosystems and at monitoring individual country progress towards easing planetary pressures and social imbalances" (p. 228). URL: https://hdr.undp.org/content/human-development-report-2020 File: hdr2020pdf.pdf
Electoral democracy index	Based on the measure from the Economist Intelligence Unit (EIU). The index is a holistic measure encompassing five aspects of a liberal democracy, including: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. URL: https://www.eiu.com/n/campaigns/democracy-index-2021 File: eiu-democracy-index-2021.pdf
Press freedom	Based on scores from Reporters Without Borders. The score (0-100) is a holistic measure of seven aspects of press freedom, including pluralism, media independence, environment and self-censorship, legislative framework, transparency, infrastructure, and abuses URL: https://rsf.org/en/index?year=2020 No file available. Data direct from infographic
Internet penetration	Percentage of the population that has access to the Internet based on various sources compiled by the International Telecommunication Union. URL: https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx File: PercentIndividualsUsingInternet.xlsx
Number of political parties in country	Based on measures from the Global Party Survey where "political parties" are those that run for election to the lower house of the legislature. Up to 10 of the largest political parties in each country is listed. URL: https://www.globalpartysurvey.org/gps-codebook File: Global Party Survey Technical Note and Codebook 6 Feb 2020.pdf

Supplementary Materials: References

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