

Method factors in democracy indicators: online appendix

Martin Elff and Sebastian Ziaja†*

January 2018, Politics and Governance 6(1)

Contents

Data sources not used in the analysis	2
Justification of indicator assignments to the conceptual dimensions	3
Freedom House	3
Polity IV	5
V-Dem	7
EIU Democracy Index	11
Summary statistics	13
Additional results using dataset D2	16
All countries	16
Sub-sample of non-democratic countries	20
Results using dataset D1	22
Testing for method factors	22
All countries	26
Sub-sample of non-democratic countries	28
References	30

*Zeppelin University Friedrichshafen; martin.elff@zu.de

†Heidelberg University; ziaja@uni-heidelberg.de [corresponding author]

Data sources not used in the analysis

Several other data sources not mentioned in the main text could have been candidates for our analysis. They were excluded for issues with availability and coverage. Arthur Banks's *Cross-National Time-Series Data Archive* (CNTS; Banks & Wilson, 2013) provides some *de facto* indicators on political regimes, and was used in Bollen's original study, but it does not provide sufficient information on how scores are generated. Moreover, the CNTS is not free of charge, which complicates replication. The *Democracy Barometer* measures the quality of 70 democracies and thus does not provide sufficient spatial coverage (Bühlmann, Merkel, & Wessels, 2008). The *CIRI Human Rights Index* (Cingranelli & Richards, 1999) is predominantly aimed at measuring human rights, but it contains some indicators that fit the definitions of our dimensions. Nonetheless, including CIRI would result in losing the most recent years (since 2011), and the 1970s, so we abstain from including CIRI variables at this point. The *Bertelsmann Transformation Index* (BTI; Bertelsmann Transformation Index, 2016) does not provide data for consolidated democracies.

Justification of indicator assignments to the conceptual dimensions

The following pages describe all the major sub-indices of our four sources and justify our decisions to assign them to one of the dimensions in each of our three conceptual frames (i.e., Bollen, Merkel and V-Dem), or to exclude them.

Freedom House

Freedom House provides two indicators for the long dataset: civil liberties and political rights. Civil liberties '[...]' allow for the freedoms of expression and belief, associational and organizational rights, rule of law, and personal autonomy without interference from the state' (Teorell et al., 2017: 284). It is thus predominantly about the ability of individuals to participate in political debate. In the Bollen framework, we assign the indicator to political liberties. In the V-Dem framework, we assign the indicator to the liberal principle. In the Merkel framework, we assign the indicator to civil rights, as negative rights seem to prevail in the definition.

Political rights '[...]' enable people to participate freely in the political process, including the right to vote freely for distinct alternatives in legitimate elections, compete for public office, join political parties and organizations, and elect representatives who have a decisive impact on public policies and are accountable to the electorate' (Teorell et al., 2017: 292). They constitute the core of Bollen's democratic rights, and of V-Dem's electoral principle. In the Merkel framework, the indicator suits the electoral regime dimension best.

For the short dataset, a more disaggregated set of indicators is available: Associational and Organizational Rights, Electoral Process, Freedom of Expression and Belief, Functioning of Government, Personal Autonomy and Individual Rights, Political Pluralism and Participation, and Rule of Law.

Associational and Organizational Rights '[...]' evaluates the freedom of assembly, demon-

strations and open public discussion; the freedom for nongovernmental organization; and the freedom for trade unions, peasant organizations and other professional and private organizations' (Teorell et al., 2017: 284). In Bollen's framework, we assign this indicator to political liberties. In the V-Dem framework, we assign the indicator to the participatory principle, as most of these issues pertain to rather active forces rather than the right of participation. In Merkel's framework, we assign the indicator to political rights.

The indicator Electoral Process '[...]' measures to what extent the national legislative representatives and the national chief authority are elected through free and fair elections' (Teorell et al., 2017: 285). The assignment of this indicator is unambiguous: in Bollen's framework, to democratic rule; in the V-Dem framework, to the electoral principle; and in Merkel's framework, to the electoral regime.

Freedom of Expression and Belief '[...]' measures the freedom and independence of the media and other cultural expressions; the freedom of religious groups to practice their faith and express themselves; the academic freedom and freedom from extensive political indoctrination in the educational system; and the ability of the people to engage in private (political) discussions without fear of harassment or arrest by the authorities' (Teorell et al., 2017: 285). In Bollen's framework, this implies political liberties; in the V-Dem framework, the liberal principle; and in Merkel's framework, civil rights, as individual liberty from harassment is at the core.

Functioning of Government '[...]' examines in what extent the freely elected head of government and a national legislative representative determine the policies of the government; if the government is free from pervasive corruption; and if the government is accountable to the electorate between elections and operates with openness and transparency' (Teorell et al., 2017: 285). These are issues of accountability and effective power to govern, which our classification schemes do not capture very well. We thus abstain from employing this indicator.

Personal Autonomy and Individual Rights '[...]' evaluates the extent of state control over travel, choice of residence, employment or institution of higher education; the right of

citizens to own property and establish private businesses; the private business? freedom from undue influence by government officials, security forces, political parties or organized crime; gender equality, freedom of choice of marriage partners and size of family; equality of opportunity and absence of economic exploitation' (Teorell et al., 2017: 291). In Bollen's framework, we assign this indicator to political liberties; in the V-Dem framework, to the liberal principle; and in Merkel's framework, to civil rights.

Political Pluralism and Participation '[...]' encompasses an examination of the right of the people to freely organize in political parties; the existence of an opposition with a realistic possibility to increase its support; the ability of the people to make political choices free from domination by the military, totalitarian parties or other powerful groups; and the existence of full political rights for all minorities' (Teorell et al., 2017: 291). In Bollen's framework, we assign this indicator to political liberties; in the V-Dem framework, to the liberal principle; and in Merkel's framework, to political rights.

Rule of Law '[...]' measures the independence of the judiciary; the extent to which rule of law prevails in civil and criminal matters; the existence of direct civil control over the police; the protection from political terror, unjustified imprisonment, exile and torture; absence of war and insurgencies; and the extent to which laws, policies and practices guarantee equal treatment of various segments of the population' (Teorell et al., 2017: 292). In Bollen's framework, we assign this indicator to political liberties; in the V-Dem framework, to the liberal principle; and in Merkel's framework, to civil rights.

Polity IV

Polity IV provides six indicators of democratic or autocratic rule ('component variables'). Competitiveness of executive recruitment (XRCOMP) '[...]' refers to the extent that prevailing modes of advancement give subordinates equal opportunities to become superordinates' (Marshall, Gurr, & Jaggers, 2016: 21). The coding distinguishes the levels selection, dual/transition and election. It thus clearly refers to the electoral core of the regime: democratic rule in the Bollen framework, electoral principle in the V-Dem framework, and electoral

regime in the Merkel framework.

Executive constraints (XCONST) are defined as the '[...]' extent of institutionalized constraints on the decisionmaking powers of chief executives, whether individuals or collectivities' (Marshall et al., 2016: 24). The coding distinguishes 'unlimited authority' (0), 'slight to moderate limitation on executive authority' (3), 'substantial limitations on executive authority' (5) and (7) 'executive parity or subordination', with intermediate categories. We assign XCONST to the democratic rule, the liberal principle and the horizontal accountability dimensions, respectively.

Regulation of chief executive recruitment (XRREG) '[...]' refers to the extent to which a polity has institutionalized procedures for transferring executive power' (Marshall et al., 2016: 20). XRREG distinguishes unregulated (forceful), designational/transitional, and regulated transfers of power. Since regulated transfers can occur in both democratic and autocratic (absolutist) regimes, we do not expect this variable to clearly load on any dimension of democracy and abstain from using it here.

Regulation of participation (PARREG) refers to the existence of '[...]' binding rules on when, whether, and how political preferences are expressed' (Marshall et al., 2016: 25). The coding distinguishes 'unregulated', 'multiple identity', 'sectarian', 'restricted' and 'regulated' participation. In unregulated settings, '[...]' competition is fluid and often characterized by recurring coercion among shifting coalitions of partisan groups' (Marshall et al., 2016: 26). Vreeland (2008) recommends omitting PARREG (and PARCOMP, see below) from the aggregate polity index when studying effects of regime on conflict, as it may introduce endogeneity. For our purpose, PARREG is useful, however, as it taps into the average ability of individuals to participate in the political process. In Bollen's framework, we classify the indicator as political liberties; in the V-Dem framework, as liberal; and in Merkel's framework, as political rights.

The competitiveness of participation (PARCOMP) '[...]' refers to the extent to which alternative preferences for policy and leadership can be pursued in the political arena' (Marshall et al., 2016: 26). Levels are 'unapplicable' (0; for unregulated polities), 'repressed' (1), 'sup-

pressed' (2), 'factional' (3), 'transitional' (4), and 'competitive' (5). In Bollen's framework, we classify PARCOMP as democratic rule; in the V-Dem framework, as participatory; and in Merkel's framework, as political rights.

Openness of executive recruitment (XROPEN) exists where '[...] all the politically active population has an opportunity, in principle, to attain the position through a regularized process' (Marshall et al., 2016: 22). The categories are unregulated (0), closed (1), dual executive?designation (2), dual executive?election (3) and open (4). In Bollen's framework, we classify XROPEN as political liberties; in the V-Dem framework, as participatory; and in Merkel's framework, as political rights.

V-Dem

V-Dem is a collection of 283 indicators coded by project managers, research assistants, country coordinators and country experts (Coppedge et al., 2016: 31, 35). These indicators are aggregated to 60 partially overlapping indices and sub-indices. We consider all 14 'lower-level democracy and governance indices' assigned to democratic principles as potential indicators for our exercise. They are listed in Appendix D of the V-Dem codebook (Coppedge et al., 2016: 437–441).

The *electoral principle* comprises the Expanded freedom of expression index (v2x_freexp_thick), the Freedom of association index (thick) (v2x_frassoc_thick), the Share of population with suffrage (v2x_suffr), the Clean elections index (v2xel_frefair), and the Elected executive index (de jure) (v2x_accex). The Expanded freedom of expression index addresses the question 'To what extent does government respect press & media freedom, the freedom of ordinary people to discuss political matters at home and in the public sphere, as well as the freedom of academic and cultural expression?' (ibid. 52). In Bollen's framework, we classify the indicator under political liberties. In the V-Dem framework, we deviate from the V-Dem classification as belonging to the electoral principle (justified by the essential character of free expression for the electoral principle to function) and assign it to the liberal principle, as it is less about the electoral process and more about the organized and

active expression of opinions. For the same reason, we assign the indicator to political rights in Merkel's framework.

The Freedom of association index (thick) (v2x_frassoc_thick) addresses the question 'To what extent are parties, including opposition parties, allowed to form and to participate in elections, and to what extent are civil society organizations able to form and to operate freely?' (ibid. 51). In Bollen's framework, we classify the indicator as political liberties; in the V-Dem framework, as electoral; and in Merkel's framework, as political rights.

The Share of population with suffrage (v2x_suffr) addresses the question 'What share of adult citizens (as defined by statute) has the legal right to vote in national elections?' (ibid. 53). It is at the core of the electoral principle. In Bollen's framework, we classify the indicator as democratic rule; in the V-Dem framework, as electoral; and in Merkel's framework, as electoral regime.

The Clean elections index (v2xel_frefair) addresses the question 'To what extent are elections free and fair?' (ibid. 54). This implies and absence of '[...] absence of registration fraud, systematic irregularities, government intimidation of the opposition, vote buying, and election violence'. As suffrage, this indicator is at the core of the electoral principle. In Bollen's framework, we classify it as democratic rule; in the V-Dem framework, as electoral; and in Merkel's framework, as electoral regime.

The Elected executive index (de jure) (v2x_accex) addresses the question 'Is the chief executive appointed through popular elections (either directly or indirectly)?' (ibid. 54), but it is a *de jure* assessment that also includes 'sham elections'. As we aim at capturing *de facto* characteristics of democracies, we abstain from employing this indicator. The presence of elections should be captured by the clean elections index.

The *liberal principle* comprises the Equality before the law and individual liberty index (v2xcl_rol), the Judicial constraints on the executive index (v2x_jucon), and the Legislative constraints on the executive index (v2xlg_legcon). The Equality before the law and individual liberty index (v2xcl_rol) addresses the question 'To what extent are laws transparent and rigorously enforced and public administration impartial, and to what extent do citizens enjoy

access to justice, secure property rights, freedom from forced labor, freedom of movement, physical integrity rights, and freedom of religion?’ (ibid. 55). In Bollen’s framework, we classify it as political liberties; in the V-Dem framework, as liberal; and in Merkel’s framework, as civil rights.

The Judicial constraints on the executive index (v2x_jucon) addresses the question ‘To what extent does the executive respect the constitution and comply with court rulings, and to what extent is the judiciary able to act in an independent fashion?’ (ibid. 56). In Bollen’s framework, we classify it as democratic rule; in the V-Dem framework, as liberal; and in Merkel’s framework, as horizontal accountability.

The Legislative constraints on the executive index (v2xlg_legcon) addresses the question ‘To what extent is the legislature and government agencies (e.g., comptroller general, general prosecutor, or ombudsman) capable of questioning, investigating, and exercising oversight over the executive?’ (ibid. 56). We classify this indicator exactly as the judicial constraints on the executive index.

The *deliberative principle* is measured only on the mid-level with the Deliberative component index (v2xdl_delib), which is aggregated directly from the indicator level. As we argue above, this includes ‘soft’ issues such as ‘public reasoning focused on the common good’ and ‘respectful dialogue at all levels’, which are not measured explicitly (or at least separately) by other sources (with the potential exception of the Bertelsmann Transformation Index). We thus abstain from employing indicators from this principle.

The *egalitarian principle* comprises the Equal protection index (v2xeg_eqprotec) and the Equal distribution of resources index (v2xeg_eqdr). As we argue above, the egalitarian principle includes socio-economic issues and is broader than most definitions of democracy employed in empirical research. The Equal protection index (v2xeg_eqprotec), however, refers to justice and liberties: ‘How equal is the protection of rights and freedoms across social groups by the state?’ (ibid. 59). In Bollen’s framework, we thus classify it to political liberties; in the V-Dem framework, to the liberal principle; and in Merkel’s framework, to civil rights. The Equal distribution of resources index (v2xeg_eqdr) refers to resources,

which is why we abstain from employing it.

The *participatory principle* comprises the Civil society participation index (v2x_cspart), the Direct popular vote index (v2xdd_dd), the Local government index (v2xel_locelec), and the Regional government index (v2xel_regelec). The Civil society participation index (v2x_cspart) addresses the question ‘Are major CSOs [civil society organizations] routinely consulted by policymaker; how large is the involvement of people in CSOs; are women prevented from participating; and is legislative candidate nomination within party organization highly decentralized or made through party primaries?’ (ibid. 57). In Bollen’s framework, we classify the indicator as political liberties; in the V-Dem framework, as participatory; and in Merkel’s framework, as political rights.

The Direct popular vote index (v2xdd_dd) addresses the question ‘To what extent is the direct popular vote utilized?’ (ibid. 57). As we argue above, direct vote is a contentious issue in democracy theory and not necessarily more democratic in the extended sense as government for all people rather than the tyranny of the majority. We thus abstain from assigning this indicator to any dimension.

The Local government index (v2xel_locelec) and the Regional government index (v2xel_regelec) refer to the internal organization of the state and the amount of local democracy. As most sources focus on national democracy only, we abstain from assigning these indicators.

There is a range of alternative indices not assigned to the democratic principles that aim at measuring issues such as political empowerment of women, corruption and civil liberties (Coppedge et al., 2016: 442–446). These draw to a large degree, however, on the same indicators as those mid-level indices assigned to democratic principles. The Core civil society index (v2xcs_ccsi), for example, contains the indicators CSO entry and exit (v2cseeorgs), CSO repression (v2csreprss), and CSO participatory environment (v2csprtcpt). The former two are already included in Freedom of association index (thick) (v2x_frassoc_thick), the latter in the Civil society participation index (v2x_cspart). We abstain from employing these indices in order to avoid the duplication of information.

EIU Democracy Index

The Economist Intelligence Unit's (EIU) index of democracy distinguishes five sub-categories of democracy: *electoral process and pluralism*, *the functioning of government*, *political participation*, *democratic political culture*, and *civil liberties* (Economist Intelligence Unit, 2014: 36, 40–49). The EIU does not provide an explicit conceptual clarification on what these categories shall encompass. Instead, it provides a list of questions that inform the category scores.

Electoral process and pluralism contains free and fair elections, suffrage, campaign funding, opposition parties, access to office and the freedom of association. In Bollen's framework, we assign the indicator to democratic rule; in the V-Dem framework, to the electoral principle; and in Merkel's framework, to the electoral regime. The indicator is somewhat broader, capturing issues of political rights as well, but the electoral core plays the central role.

The *functioning of government* entails legislative rights, checks and balances, freedom from military, foreign or other parallel institutions next to the democratic government, authority over the country's territory, corruption, and public confidence in government institutions. This indicator is also somewhat broader than our categories allow, as territorial control and corruption exemplify. Nonetheless, its core is about the ability of legislature and executive to perform for the benefit of democracy. In Bollen's framework, we assign the indicator to democratic rule; in the V-Dem framework, to the liberal principle; and in Merkel's framework, to horizontal accountability.

Political participation refers to turnout, party and NGO membership, religious interference, women's representation, participation in lawful demonstrations, literacy, and popular interest in politics. In Bollen's framework, we assign the indicator to political liberties; it represents more the active participation than the right to the same, but active participation presupposes that right. For the same reasons we assign the indicator to political rights in Merkel's framework. In the V-Dem framework, we are able to assign the indicator more precisely to the participatory principle.

Democratic political culture entails attitudes towards authoritarian, military and technocratic rule, towards criminal punishment and democracy. The indicator is very much about individual attitudes, not about individual engagement, which would permit classifying it under the participatory principle in the V-Dem framework. But in sum the indicator is too narrowly focused on popular support for democracy in general to fit any dimension in any of our three conceptual frameworks well. We thus omit this indicator from our analysis.

Civil liberties entails free media, freedom of expression and organization, censorship, torture by the state, judicial independence, religious freedom, equal treatment under the law, basic security, property rights, racial discrimination and perceptions on human rights abuses. In Bollen's framework, we assign the indicator to political liberties; in the V-Dem framework, to the liberal principle. In Merkel's framework, the indicator touches issues of political rights (association), civil rights (torture) and horizontal accountability (judicial independence). As negative rights (pertaining to human security) prevail, we opt for civil rights as primary assignment.

Summary statistics

Table 1: Summary statistics, long dataset

Indicator	N	Mean	Std. dev.	Min.	Max.
Year	5864	1994.35	12.33	1972.00	2014.00
Civil liberties	5864	4.13	1.89	1.00	7.00
Political rights	5864	4.11	2.20	1.00	7.00
PARCOMP	5864	2.96	1.52	0.00	5.00
PARREG	5864	3.49	1.12	1.00	5.00
XCONST	5864	4.35	2.30	1.00	7.00
XRCOMP	5864	1.83	1.12	0.00	3.00
XROPEN	5864	3.27	1.47	0.00	4.00
Civil society particip.	5864	0.59	0.28	0.02	0.99
Freedom of assoc.	5864	0.57	0.33	0.02	0.96
Freedom of expr.	5864	0.58	0.32	0.01	0.99
Judicial control	5864	0.55	0.30	0.01	0.99
Rule of law	5864	0.62	0.29	0.00	1.00
Equal protection index	5864	0.61	0.26	0.02	0.99
Clean elections	5864	0.49	0.35	0.00	0.99
Legisl. control	5864	0.52	0.32	0.02	0.99

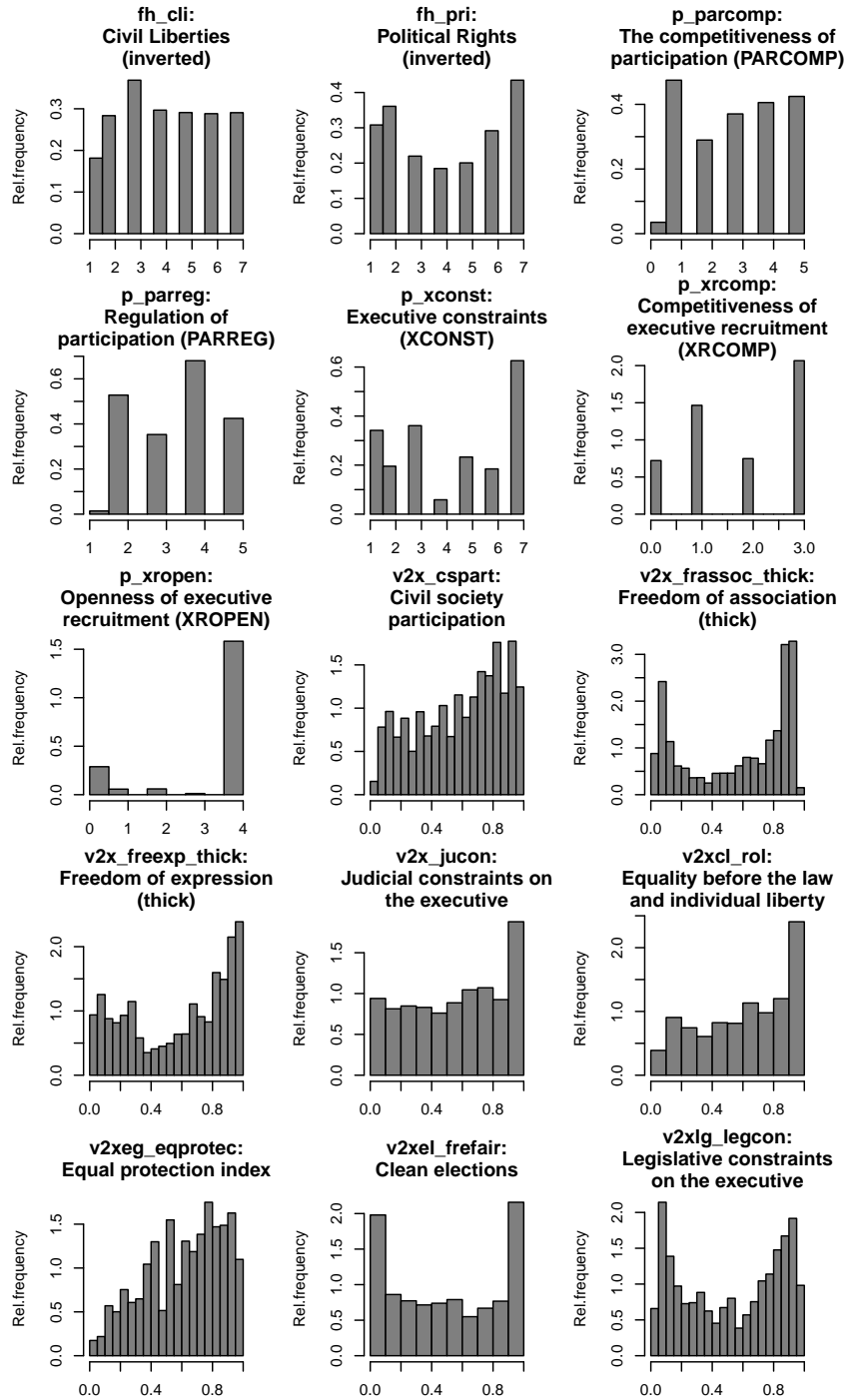


Figure 1: Histograms of the variables contained in the 'long' data set

Table 2: Summary statistics, short dataset

Indicator	N	Mean	Std. dev.	Min.	Max.
Year	1070	2010.56	2.62	2006.00	2014.00
Civil liberties	1070	6.30	2.73	0.00	10.00
Electoral process & pluralism	1070	6.07	3.53	0.00	10.00
Functioning of governm.	1070	5.03	2.46	0.00	10.00
Political particip.	1070	4.75	1.90	0.00	10.00
Assoc. & organiz. rights	1070	7.39	3.78	0.00	12.00
Electoral process	1070	7.44	4.30	0.00	12.00
Freedom of expr. and belief	1070	10.95	4.26	0.00	16.00
Personal autonomy & indiv. rights	1070	9.24	3.85	0.00	16.00
Political pluralism and part.	1070	9.68	5.10	0.00	16.00
Rule of law	1070	7.79	4.58	0.00	16.00
PARCOMP	1070	3.46	1.29	0.00	5.00
PARREG	1070	3.22	1.18	1.00	5.00
XCONST	1070	5.10	1.96	1.00	7.00
XRCOMP	1070	2.12	1.06	0.00	3.00
XROPEN	1070	3.44	1.33	0.00	4.00
Civil society particip.	1070	0.70	0.22	0.05	0.99
Freedom of assoc.	1070	0.70	0.27	0.03	0.96
Freedom of expr.	1070	0.69	0.27	0.02	0.99
Judicial control	1070	0.59	0.30	0.01	0.99
Rule of law	1070	0.71	0.25	0.02	1.00
Equal protection index	1070	0.65	0.24	0.06	0.99
Clean elections	1070	0.60	0.31	0.00	0.99
Legisl. control	1070	0.61	0.30	0.02	0.99

Additional results using dataset *D2*

All countries

Table 3: Variables in data set *D2*

Variable	Description	Source	2-Dimensional concept	3-Dimensional concept	4-Dimensional concept
eiu_cl	Civil liberties	EIU	Political liberties	Liberal principle	Civil rights
eiu_epp	Electoral process and pluralism	EIU	Democratic rule	Electoral principle	Electoral regime
eiu_fog	Functioning of government	EIU	Democratic rule	Liberal principle	Horizontal accountability
eiu_pp	Political participation	EIU	Political liberties	Participatory principle	Political rights
fh_aor	Associational and Organizational Rights	FH	Political liberties	Participatory principle	Political rights
fh_ep	Electoral Process	FH	Democratic rule	Electoral principle	Electoral regime
fh_feb	Freedom of Expression and Belief	FH	Political liberties	Liberal principle	Civil rights
fh_pair	Personal Autonomy and Individual Rights	FH	Political liberties	Liberal principle	Civil rights
fh_ppp	Political Pluralism and Participation	FH	Democratic rule	Liberal principle	Political rights
fh_rol	Rule of Law	FH	Political liberties	Liberal principle	Civil rights
p_parcomp	The competitiveness of participation (PARCOMP)	Polity	Democratic rule	Participatory principle	Political rights
p_parreg	Regulation of participation (PARREG)	Polity	Political liberties	Liberal principle	Political rights
p_xconst	Executive constraints (XCONST)	Polity	Democratic rule	Liberal principle	Horizontal accountability
p_xrcomp	Competitiveness of executive recruitment (XRCOMP)	Polity	Democratic rule	Electoral principle	Electoral regime
p_xropen	Openness of executive recruitment (XROPEN)	Polity	Political liberties	Participatory principle	Political rights
v2x_cspart	Civil society participation	V-Dem	Political liberties	Participatory principle	Political rights
v2x_frassoc_thick	Freedom of association (thick)	V-Dem	Political liberties	Participatory principle	Political rights
v2x_freexp_thick	Freedom of expression (thick)	V-Dem	Political liberties	Electoral principle	Political rights
v2x_jucon	Judicial constraints on the executive	V-Dem	Political liberties	Liberal principle	Political rights
v2xcl_rol	Equality before the law and individual liberty	V-Dem	Democratic rule	Liberal principle	Horizontal accountability
v2xeg_eqprotec	Equal protection index	V-Dem	Political liberties	Liberal principle	Civil rights
v2xel_frefair	Clean elections	V-Dem	Political liberties	Liberal principle	Civil rights
v2xlg_legcon	Legislative constraints on the executive	V-Dem	Democratic rule	Electoral principle	Electoral regime
				Liberal principle	Horizontal accountability

Table 4: Estimates of the final model fitted to all countries in data set *D2* — Part 1: Loadings of indicators for *Civil Rights* and *Political Rights*

	civ_rights	pol_rights	eiu	fh	p	vdem
eiu_cl	0.71 (0.00)		0.71 (0.00)			
fh_feb	0.80*** (0.03)			0.54*** (0.05)		
v2xcl_rol	0.91*** (0.02)					0.29*** (0.07)
fh_pair	0.93*** (0.02)			0.25*** (0.05)		
v2xeg_eqprotec	0.77*** (0.03)					0.12 (0.11)
fh_rol	0.92*** (0.02)			0.34*** (0.04)		
fh_aor		0.71 (0.00)		0.71 (0.00)		
eiu_pp		0.67*** (0.08)	0.46*** (0.13)			
v2x_cspart		0.63*** (0.03)				0.72*** (0.02)
v2x_frassoc_thick		0.65*** (0.05)				0.71*** (0.05)
v2x_freexp_thick		0.67*** (0.04)				0.73*** (0.03)
p_parcomp		0.28** (0.09)			0.36*** (0.01)	
p_parreg		-0.08 (0.09)			0.85*** (0.01)	
p_xropen		-0.05 (0.07)			0.97*** (0.01)	
fh_ppp		0.80*** (0.03)		0.56*** (0.04)		

Table 5: Estimates of the final model fitted to all countries in data set *D2* — Part 2: Loadings of indicators for *Horizontal Accountability* and *Electoral Regulation*

	horiz_acc	elec_reg	eiu	fh	p	vdem
eiu_fog	0.86*** (0.03)		0.35*** (0.07)			
v2x_jucon	0.92*** (0.02)					0.27*** (0.07)
p_xconst	0.14 (0.08)				0.96*** (0.01)	
v2xlg_legcon	0.81*** (0.04)					0.46*** (0.06)
eiu_epp		0.82*** (0.03)	0.52*** (0.04)			
fh_ep		0.48*** (0.06)		0.28* (0.11)		
p_xrcomp		0.23** (0.07)			0.97*** (0.02)	
v2xel_frefair		0.96*** (0.01)				0.06 (0.08)

Table 6: Estimates of the final model fitted to all countries in data set *D2* — Part 3: Variances and covariances of the conceptual factors

	civ_rights	pol_rights	horiz_acc	elec_reg
civ_rights	1.00 (0.00)	1.01*** (0.01)	0.96*** (0.01)	0.98*** (0.01)
pol_rights	1.01*** (0.01)	1.00 (0.00)	0.98*** (0.03)	1.04*** (0.02)
horiz_acc	0.96*** (0.01)	0.98*** (0.03)	1.00 (0.00)	0.95*** (0.01)
elec_reg	0.98*** (0.01)	1.04*** (0.02)	0.95*** (0.01)	1.00 (0.00)
Deviance	2942.16			
CFI	0.56			
RMSEA	0.27			
SRMR	1.00			
N	157			

Sub-sample of non-democratic countries

Table 7: Estimates of the final model fitted to non-democratic countries in data set *D2* — Part 1: Loadings of indicators for *Civil Rights* and *Political Rights*

	civ_rights	pol_rights	eiu	fh	p	vdem
eiu_cl	0.69*** (0.01)		0.69*** (0.01)			
fh_feb	0.72*** (0.04)			0.64*** (0.05)		
v2xcl_rol	0.85*** (0.03)					0.46*** (0.05)
fh_pair	0.88*** (0.03)			0.35*** (0.08)		
v2xeg_eqprotec	0.73*** (0.05)					0.34*** (0.08)
fh_rol	0.86*** (0.04)			0.49*** (0.06)		
fh_aor		0.70*** (0.00)		0.70*** (0.00)		
eiu_pp		0.55*** (0.11)	0.70*** (0.11)			
v2x_cspart		0.76*** (0.03)				0.60*** (0.03)
v2x_frassoc_thick		0.80*** (0.03)				0.54*** (0.05)
v2x_freexp_thick		0.81*** (0.03)				0.56*** (0.04)
p_parcomp		-0.82*** (0.04)			0.36*** (0.03)	
p_parreg		-0.98*** (0.01)			-0.01 (0.03)	
p_xropen		-0.78*** (0.06)			0.52*** (0.07)	
fh_ppp		0.79*** (0.04)		0.58*** (0.05)		

Table 8: Estimates of the final model fitted to non-democratic countries in data set *D2* — Part 2: Loadings of indicators for *Horizontal Accountability* and *Electoral Regulation*

	horiz_acc	elec_reg	eiu	fh	p	vdem
eiu_fog	0.85*** (0.05)		0.32* (0.13)			
v2x_jucon	0.87*** (0.03)					0.38*** (0.07)
p_xconst	-0.83*** (0.05)				0.43*** (0.09)	
v2xlg_legcon	0.77*** (0.05)					0.49*** (0.06)
eiu_epp		0.77*** (0.03)	0.60*** (0.05)			
fh_ep		-0.55*** (0.07)		0.84*** (0.04)		
p_xrcomp		-0.69*** (0.07)			0.73*** (0.06)	
v2xel_frefair		0.86*** (0.03)				0.28*** (0.07)

Table 9: Estimates of the final model fitted to non-democratic countries in data set *D2* — Part 3: Variances and covariances of the conceptual factors

	civ_rights	pol_rights	horiz_acc	elec_reg
civ_rights	1.00 (0.00)	0.94*** (0.01)	0.97*** (0.01)	0.98*** (0.01)
pol_rights	0.94*** (0.01)	1.00 (0.00)	0.95*** (0.02)	1.00*** (0.01)
horiz_acc	0.97*** (0.01)	0.95*** (0.02)	1.00 (0.00)	0.97*** (0.02)
elec_reg	0.98*** (0.01)	1.00*** (0.01)	0.97*** (0.02)	1.00 (0.00)
Deviance	1050.25			
CFI	0.44			
RMSEA	0.25			
SRMR	3.11			
N	56			

Results using dataset *D1*

Testing for method factors

Table 10: Variables in data set *D1*

Variable	Description	Source	2-Dimensional concept	3-Dimensional concept	4-Dimensional concept
fh_cli	Civil Liberties (inverted)	FH	Political liberties	Liberal principle	Civil rights
fh_pri	Political Rights (inverted)	FH	Democratic rule	Electoral principle	Electoral regime
p_parcomp	The competitiveness of participation (PARCOMP)	Polity	Democratic rule	Participatory principle	Political rights
p_parreg	Regulation of participation (PARREG)	Polity	Political liberties	Liberal principle	Political rights
p_xconst	Executive constraints (XCONST)	Polity	Democratic rule	Liberal principle	Horizontal accountability
p_xrcomp	Competitiveness of executive recruitment (XRCOMP)	Polity	Democratic rule	Electoral principle	Electoral regime
p_xropen	Openness of executive recruitment (XROPEN)	Polity	Political liberties	Participatory principle	Political rights
v2x_cspart	Civil society participation	V-Dem	Political liberties	Participatory principle	Political rights
v2x_frassoc_thick	Freedom of association (thick)	V-Dem	Political liberties	Electoral principle	Political rights
v2x_freexp_thick	Freedom of expression (thick)	V-Dem	Political liberties	Liberal principle	Political rights
v2x_jucon	Judicial constraints on the executive	V-Dem	Political liberties	Liberal principle	Political rights
v2xcl_rol	Equality before the law and individual liberty	V-Dem	Democratic rule	Liberal principle	Horizontal accountability
v2xeg_eqprotec	Equal protection index	V-Dem	Political liberties	Liberal principle	Civil rights
v2xel_frefair	Clean elections	V-Dem	Political liberties	Liberal principle	Civil rights
v2xlg_legcon	Legislative constraints on the executive	V-Dem	Democratic rule	Electoral principle	Electoral regime
			Democratic rule	Liberal principle	Horizontal accountability

Table 11: Model comparison tests for the presence of method factors in data set *D1* (between-country cross-section)

(a) All countries

	Deviance	Mod.Df	χ^2	Δ Df	<i>p</i> -value	CFI	RMSEA	SRMR
1 Dimension	719.5	105				0.846	0.191	0.055
+ Method fact.	450.7	91	268.8	14	0.000	0.910	0.157	0.042
2 Dimensions	685.0	104				0.855	0.187	0.055
+ Method fact.	375.7	90	309.3	14	0.000	0.929	0.141	0.045
3 Dimensions	709.2	102				0.848	0.193	0.055
+ Method fact.	419.1	88	290.0	14	0.000	0.917	0.153	0.042
4 Dimensions	649.6	99				0.862	0.186	0.060
+ Method fact.	351.3	85	298.2	14	0.000	0.933	0.140	0.048

(b) Non-democratic countries only

	Deviance	Mod.Df	χ^2	Δ Df	<i>p</i> -value	CFI	RMSEA	SRMR
1 Dimension	313.9	105				0.735	0.196	0.098
+ Method fact.	206.8	91	107.1	14	0.000	0.853	0.156	0.068
2 Dimensions	301.9	104				0.749	0.191	0.098
+ Method fact.	178.8	90	123.2	14	0.000	0.888	0.138	0.072
3 Dimensions	312.0	102				0.734	0.199	0.099
+ Method fact.	195.9	88	116.1	14	0.000	0.863	0.154	0.069
4 Dimensions	270.7	99				0.782	0.183	0.099
+ Method fact.	139.5	85	131.2	14	0.000	0.931	0.111	0.084

Table 12: Model comparison tests for the presence of method factors in data set *D1* (within-country first differences)

(a) All countries

	Deviance	Mod.Df	χ^2	Δ Df	<i>p</i> -value	CFI	RMSEA	SRMR
1 Dimension	13283.9	105				0.702	0.148	0.095
+ Method fact.	1867.8	91	11416.0	14	0.000	0.960	0.059	0.035
2 Dimensions	11339.5	104				0.746	0.138	0.105
+ Method fact.	1817.4	90	9522.1	14	0.000	0.961	0.058	0.034
3 Dimensions	12990.8	102				0.708	0.149	0.093
+ Method fact.	1774.6	88	11216.2	14	0.000	0.962	0.058	0.034
4 Dimensions	11679.2	99				0.738	0.143	0.100
+ Method fact.	1644.0	85	10035.2	14	0.000	0.965	0.057	0.032

(b) Non-democratic countries only

	Deviance	Mod.Df	χ^2	Δ Df	<i>p</i> -value	CFI	RMSEA	SRMR
1 Dimension	11067.6	105				0.612	0.137	0.098
+ Method fact.	1467.4	91	9600.2	14	0.000	0.951	0.052	0.034
2 Dimensions	8585.0	104				0.700	0.121	0.109
+ Method fact.	1446.3	90	7138.7	14	0.000	0.952	0.052	0.033
3 Dimensions	10755.5	102				0.623	0.137	0.095
+ Method fact.	1408.0	88	9347.5	14	0.000	0.953	0.052	0.033
4 Dimensions	9371.8	99				0.672	0.130	0.108
+ Method fact.	1354.1	85	8017.7	14	0.000	0.955	0.052	0.031

All countries

Table 13: Estimates of the final model fitted to all countries in data set *D2* — Part 1: Loadings of indicators for *Civil Rights* and *Political Rights*

	civ_rights	pol_rights	eiw	fh	p	vdem
eiw_cl	0.71 (0.00)		0.71 (0.00)			
fh_feb	0.80*** (0.03)			0.54*** (0.05)		
v2xcl_rol	0.91*** (0.02)					0.29*** (0.07)
fh_pair	0.93*** (0.02)			0.25*** (0.05)		
v2xeg_eqprotec	0.77*** (0.03)					0.12 (0.11)
fh_rol	0.92*** (0.02)			0.34*** (0.04)		
fh_aor		0.71 (0.00)		0.71 (0.00)		
eiw_pp		0.67*** (0.08)	0.46*** (0.13)			
v2x_cspart		0.63*** (0.03)				0.72*** (0.02)
v2x_frassoc_thick		0.65*** (0.05)				0.71*** (0.05)
v2x_freexp_thick		0.67*** (0.04)				0.73*** (0.03)
p_parcomp		0.28** (0.09)			0.36*** (0.01)	
p_parreg		-0.08 (0.09)			0.85*** (0.01)	
p_xropen		-0.05 (0.07)			0.97*** (0.01)	
fh_ppp		0.80*** (0.03)		0.56*** (0.04)		

Table 14: Estimates of the final model fitted to all countries in data set *D2* — Part 2: Loadings of indicators for *Horizontal Accountability* and *Electoral Regulation*

	horiz_acc	elec_reg	eiu	fh	p	vdem
eiu_fog	0.86*** (0.03)		0.35*** (0.07)			
v2x_jucon	0.92*** (0.02)					0.27*** (0.07)
p_xconst	0.14 (0.08)				0.96*** (0.01)	
v2xlg_legcon	0.81*** (0.04)					0.46*** (0.06)
eiu_epp		0.82*** (0.03)	0.52*** (0.04)			
fh_ep		0.48*** (0.06)		0.28* (0.11)		
p_xrcomp		0.23** (0.07)			0.97*** (0.02)	
v2xel_frefair		0.96*** (0.01)				0.06 (0.08)

Table 15: Estimates of the final model fitted to all countries in data set *D2* — Part 3: Variances and covariances of the conceptual factors

	civ_rights	pol_rights	horiz_acc	elec_reg
civ_rights	1.00 (0.00)	1.01*** (0.01)	0.96*** (0.01)	0.98*** (0.01)
pol_rights	1.01*** (0.01)	1.00 (0.00)	0.98*** (0.03)	1.04*** (0.02)
horiz_acc	0.96*** (0.01)	0.98*** (0.03)	1.00 (0.00)	0.95*** (0.01)
elec_reg	0.98*** (0.01)	1.04*** (0.02)	0.95*** (0.01)	1.00 (0.00)
Deviance	2942.16			
CFI	0.56			
RMSEA	0.27			
SRMR	1.00			
N	157			

Sub-sample of non-democratic countries

Table 16: Estimates of the final model fitted to non-democratic countries in data set *D1* — Part 1: Loadings of indicators for *Civil Rights* and *Political Rights*

	civ_rights	elec_reg	fh	p	vdem
fh_cli	0.98*** (0.03)		0.00 (0.00)		
v2xcl_rol	0.81*** (0.04)				0.40*** (0.10)
v2xeg_eqprotec	0.35** (0.12)				0.40** (0.12)
fh_pri		1.00*** (0.00)	-0.00 (0.00)		
p_xrcomp		0.70*** (0.08)		0.70*** (0.07)	
v2xel_frefair		0.70*** (0.08)			0.57*** (0.13)

Table 17: Estimates of the final model fitted to non-democratic countries in data set *D1* — Part 2: Loadings of indicators for *Horizontal Accountability* and *Electoral Regulation*

	horiz_acc	pol_rights	fh	p	vdem
v2x_jucon	0.71*** (0.09)				0.18 (0.14)
p_xconst	0.80*** (0.06)			0.41*** (0.07)	
v2xlg_legcon	0.70*** (0.06)				0.27 (0.15)
v2x_cspart		0.84*** (0.06)			0.42*** (0.12)
v2x_frassoc_thick		0.90*** (0.04)			0.02 (0.12)
v2x_freexp_thick		0.95*** (0.02)			0.11 (0.09)
p_parcomp		0.78*** (0.11)		0.05 (0.08)	
p_parreg		-0.77*** (0.08)		-0.09 (0.12)	
p_xropen		0.28** (0.10)		0.81*** (0.09)	

Table 18: Estimates of the final model fitted to non-democratic countries in data set *D1* — Part 3: Variances and covariances of the conceptual factors

	civ_rights	elec_reg	horiz_acc	pol_rights
civ_rights	1.00 (0.00)	0.94*** (0.02)	0.89*** (0.05)	0.89*** (0.04)
elec_reg	0.94*** (0.02)	1.00 (0.00)	0.92*** (0.04)	0.86*** (0.04)
horiz_acc	0.89*** (0.05)	0.92*** (0.04)	1.00 (0.00)	0.91*** (0.05)
pol_rights	0.89*** (0.04)	0.86*** (0.04)	0.91*** (0.05)	1.00 (0.00)
Deviance	139.49			
CFI	0.93			
RMSEA	0.11			
SRMR	0.08			
N	52			

References

- Banks, A. S., & Wilson, K. A. (2013). *Cross-national time-series data archive*. Databanks International.
- Bertelsmann Transformation Index. (2016). *Transformation index BTI 2016: Political management in international comparison*. Bertelsmann Stiftung.
- Bühlmann, M., Merkel, W., & Wessels, B. (2008). *The quality of democracy: Democracy barometer for established democracies*.
- Cingranelli, D. L., & Richards, D. L. (1999). Respect for human rights after the end of the cold war. *Journal of Peace Research*, 36(5), 511–534.
- Coppedge, M., Gerring, J., Lindberg, S. I., Skaaning, S.-E., Teorell, J., David Altman, ... Farhad Mir. (2016). *V-Dem codebook v6*. Varieties of Democracy (V-Dem) Project.
- Economist Intelligence Unit. (2014). *Democracy index 2014: Democracy and its discontents*. Retrieved from http://graphics.eiu.com/PDF/Democracy_Index_2010_web.pdf
- Marshall, M. G., Gurr, T. R., & Jaggers, K. (2016). *Polity IV project: Political regime characteristics and transitions, 1800-2015: Dataset users' manual*. Center for Systemic Peace. Retrieved from <http://www.systemicpeace.org/inscr/p4manualv2015.pdf>
- Teorell, J., Dahlberg, S., Holmberg, S., Rothstein, B., Khomenko, A., & Svensson, R. (2017). *The QoG standard dataset 2017 codebook*. University of Gothenburg: The Quality of Government Institute. Retrieved from <http://www.qog.pol.gu.se> doi:10.18157/QoGStdJan17
- Vreeland, J. R. (2008). The effect of political regime on civil war: Unpacking anocracy. *Journal of Conflict Resolution*, 52(3), 401–425.