



THE GLOBAL STATE OF DEMOCRACY INDICES: TECHNICAL PROCEDURES GUIDE

Version 7 (2023)



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About this document

The Global State of Democracy Indices: Technical Procedures Guide, Version 7 is the third in a set of documents prepared by International IDEA to present the Global State of Democracy (GSoD) Indices. It outlines the technical aspects of constructing the Indices, and complements The Global State of Democracy Indices Methodology: Conceptualization and Measurement Framework, Version 7 (Skaaning 2023), which presents the theoretical framework that guided the construction of the Indices, and The Global State of Democracy Indices Codebook, Version 7 (Tufis and Hudson 2023), which presents information about the data set, including variables, attributes of democracy, subattributes, subcomponents and indicators.

The GSoD Indices depict democratic trends at the country, regional and global levels across a broad range of different attributes of democracy in the period 1975–2022 but do not provide a single index of democracy. The Indices produce data for 174 countries. The data underlying the Indices is based on 157 indicators developed by various scholars and organizations using different types of sources, including expert surveys, standards-based coding by research groups and analysts, observational data and composite measures.

The Global State of Democracy is a report that aims to provide policymakers with an evidence-based analysis of the state of global democracy, supported by the GSoD Indices, in order to inform policy interventions and identify problem-solving approaches to trends affecting the quality of democracy around the world.

The full publication, as well as the GSoD Indices Database, can be accessed online:

<https://www.idea.int/gsod>

INTRODUCTION

This Guide outlines the process of constructing the Global State of Democracy (GSoD) Indices, which inform The Global State of Democracy report 2023 (International IDEA 2023). It is written for readers who want a better understanding of the Indices, as well as researchers who may wish to use and build on the data contained within them. This Guide builds upon the GSoD Indices Methodology. For a detailed outline of the conceptual and measurement framework see The Global State of Democracy Indices Methodology: Conceptualization and Measurement Framework, Version 7 (Skaaning 2023).

For each component of the construction of the GSoD Indices, the Guide provides information about the procedures followed, outlined in a step-by-step description to allow the interested reader to understand the research process. The eight steps can be summarized as follows:

1. Identifying the data sources (see Chapter 1);
2. Preparing the data sources for merger (see Chapter 2);
3. Preparing the indicators for aggregation (see Chapter 3);
4. Assessing the unidimensionality of the Indices (see Chapter 4);
5. Aggregating the indicators into Indices (see Chapter 5);
6. Scaling the Indices (see Chapter 6);
7. Computing the confidence intervals (see Chapter 7); and
8. Conducting validity checks (see Chapter 8).

After a brief description of the theoretical structure that guided this project, the Guide presents the data sources, the coverage of the data set, the indicators used to construct the main attributes and subattributes of democracy, the procedures used to compute these attributes and the structure of the complete data set.

BACKGROUND

The main objective of the GSoD Indices is to identify systematic data that captures trends at the global, regional and national levels for different aspects of International IDEA's comprehensive understanding of democracy. The Indices turn a broad range of empirical indicators from various data sets into measures of different aspects (attributes, and subattributes; see Figure I.1) of democracy that can be used to evaluate the state of democracy at the global, regional and national levels. The Indices can also help stakeholders, such as policymakers, researchers and civil society actors, in their analysis of trends related to different aspects of democracy and to identify priority policy areas. The Global State of Democracy 2023 (International IDEA 2023) is an example of how the GSoD Indices can be used to track trends in democratic development. Version 7 of the GSoD Indices (2023) covers 174 independent countries in the period 1975–2022. The Indices are composite measures based on 157 indicators from different kinds of extant data sources. These indicators are assigned to the different subattributes in the conceptual framework and combined into the GSoD Indices using either item-response theory (IRT) modelling, Bayesian factor analysis (BFA) or mathematical operations such as multiplication and averaging. A key feature of the methodology is that it generates uncertainty estimates for most of the indices, which allows users of the data set to assess whether the differences in scores over time and across countries are significant.

The GSoD Indices were produced by a team of International IDEA staff and two external experts. The initial design of the Indices was supervised by an Expert Advisory Board consisting of five leading experts in the field of democracy measurement. To ensure consistency, transparency and high levels of measurement validity and reliability, careful justification and documentation of the conceptual distinctions and methodological choices made, and the use of state-of-the-art procedures were emphasized at all stages of the construction of the Indices.

CONCEPTUAL STRUCTURE

The GSoD Indices build on an elaborate conceptual framework that is rooted in International IDEA's State of Democracy (SoD) Assessment Framework (Beetham et al. 2008). The SoD Assessment Framework is defined by two principles (popular control and political equality), seven mediating values

(participation, authorization, representation, accountability, transparency, responsiveness and solidarity), and four pillars (citizens, law and rights; representative and accountable government; civil society and popular participation; and democracy beyond the state). For more details, see the SoD Assessment framework (Beetham et al. 2008) and the GSoD Indices methodology (Skaaning 2023). The democratic principles underpinning the SoD framework—popular control and political equality—are also at the core of the GSoD Indices. In order to construct the GSoD Indices, however, the SoD conceptual framework was modified to transform it into a systematic, cross-national and cross-temporal quantitative measurement tool (Skaaning 2023).

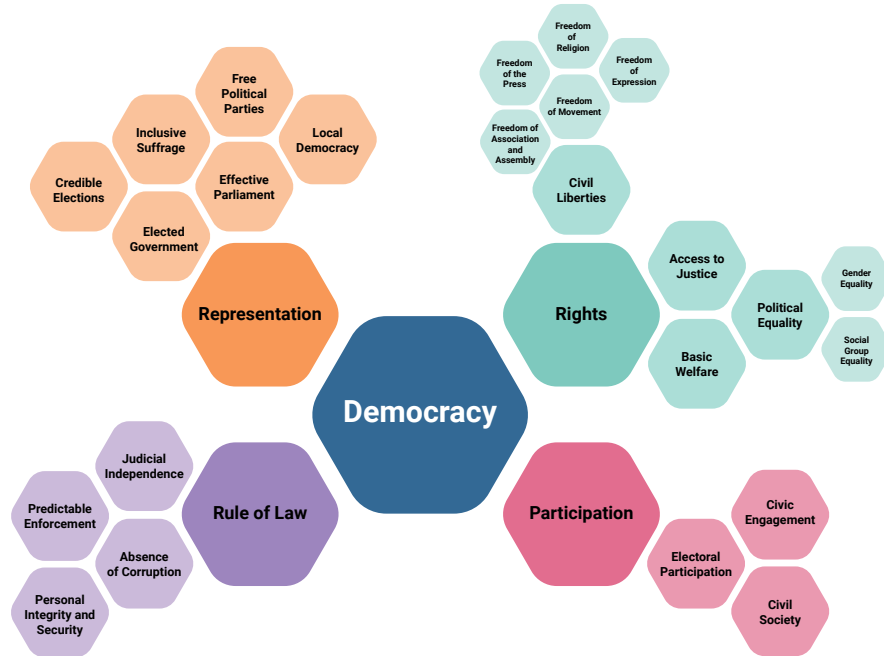
The GSoD Indices aim to capture the extent to which (a) there is effective popular control over public decision-makers, or vertical accountability; (b) citizens have politically relevant freedoms and power resources; (c) executive power is checked effectively by other powers, or horizontal accountability; (d) public authorities are impartial and predictable in implementing the law; and (e) people have and make use of various opportunities for political participation at different levels (Skaaning 2023).

The GSoD data set therefore contains separate, fine-grained Indices related to four attributes of democracy (see Beetham 1999: 154–57; Beetham et al. 2008: 27–28):

1. Representation (free and equal access to political power)
2. Rights (individual liberties and resources)
3. Rule of Law (predictable and equal enforcement of the law, and limitation of government power)
4. Participation (instruments for and realization of political involvement)

In addition, the GSoD conceptual framework contains, at lower levels of abstraction, 17 subattributes and an additional five subcomponents of Civil Liberties and two subcomponents of Political Equality. Figure 1 presents a schematic overview of the GSoD conceptual framework. Separate GSoD Indices are constructed for each attribute and subattribute (see Table I.1).

Figure I.1. The Global State of Democracy: Conceptual framework



Source: International IDEA, *The Global State of Democracy 2023: The New Checks and Balances* (Stockholm: International IDEA, 2023), <<https://doi.org/10.31752/idea.2023.78>>

Table I.1. Attributes, subattributes and general assessment questions of the GSoD conceptual framework

Attribute	Subattribute	Assessment question
1. Representation (free and equal access to political power)	1.1. Credible Elections	To what extent are elections free from irregularities?
	1.2. Inclusive Suffrage	To what extent do all adult citizens have voting rights?
	1.3. Free Political Parties	To what extent are political parties free to form and campaign for office?
	1.4. Elected Government	To what extent is access to government determined by elections?
	1.5. Effective Parliament	To what extent does parliament oversee the executive?
	1.6. Local Democracy	To what extent are there freely elected, influential local governments?
2. Rights (individual liberties and resources)	2.1. Access to Justice	To what extent is there equal, fair access to justice?
	2.2. Civil Liberties	To what extent are civil liberties respected?
	2.3. Basic Welfare	To what extent is there basic welfare?
	2.4. Political Equality	To what extent is there political equality?
3. Rule of Law (predictable and equal enforcement of the law, and limitation of government power)	3.1. Judicial Independence	To what extent are the courts independent?
	3.2. Absence of Corruption	To what extent is the exercise of public authority free from corruption?
	3.3. Predictable Enforcement	To what extent is the enforcement of public authority predictable?
	3.4. Personal Integrity and Security	To what extent are people free from violence?
4. Participatory Engagement (instruments of and for the realization of political involvement)	4.1. Civil Society	To what extent are civil society organizations free and influential?
	4.2. Civic Engagement	To what extent do people participate in civil society organizations?
	4.3. Electoral Participation	To what extent do people participate in national elections?

Source: Skaaning (2023).

Chapter 1

DATA SOURCES

International IDEA's GSoD Indices are composite measures based on 157 indicators collected from 20 different data sets. No original data collection was carried out in connection with the initial construction of the GSoD Indices. However, since 2018, International IDEA has coded new years for several of the datasets that have not been updated by their original authors.

A number of criteria guided the selection of the data sets to be used for collecting the indicators. First, only those data sets that provided transparent and credible information on data-generating processes were selected. Second, data sets were needed with extensive coverage both spatially (at least 140 countries) and temporally (at least 15 years in the period 1975–2022). Third, data sets were also needed that have been and will continue to be updated on a regular basis. Fourth, priority was given to open-access data sets.

Four different types of sources were used to collect data for these data sets:

1. Expert surveys (ES), for which country experts generate data based on their assessment of the situation regarding particular issues in a given country;
2. Standards-based in-house coding (IC), which is used by researchers to generate data based on an evaluative assessment of country-specific information collected through desk research from various reports, academic publications, reference works or news sources;
3. Observational data (OD) on features that are directly observable and do not need the interpretation of experts or researchers, such as infant mortality rates or the representation of women in parliament; and
4. Composite measures (CM), which generate data based on a number of variables from different existing data sets rather than on original data collection.

For a more detailed discussion of the advantages and disadvantages of the various types of data used see Skaaning (2023). Table A.1 (see Annex A) lists the 20 data sets used, the type of data they offer and the number of indicators collected from each of them.

Step 1: Gathering the data sources

The first step was to gather the data sources for use in constructing the GSoD Indices. For each data set, the most recent version of the data was downloaded, together with the corresponding codebook or other supporting documents required to understand the content of the data set.

For the most recent update of the GSoD Indices (v7, 2023), Version 13 of the Varieties of Democracy (V-Dem) data set, released in the Spring of 2023, was used. Updated versions of the Civil Liberties Dataset (CLD), the Lexical Index of Electoral Democracy (LIED) and the Media Freedom Dataset were obtained directly from the authors. The International Country Risk Guide (ICRG)

data set was purchased. For the remaining fifteen data sets (see Table A.1), the versions available online were downloaded during March–May 2023. Since the CIRIGHTS, Polity5 and Political Terror Scale data sets had not been updated by that time, missing scores for 2020 to 2022 (as needed) were added by International IDEA staff based on the Human Rights Reports of the U.S. State Department and in close consultation with the academic advisors of the GSoD Report. A copy of the downloaded data was archived for future reference. The next step in the procedure was to prepare the data to enable the indicators to be consolidated into a single data set.

Note: Examples of the syntax (code) included in this Guide are provided only for those steps that involve the actual computation of the GSoD Indices. The data cleaning procedure can be carried out in multiple ways, primarily using R.

Table 1.1. Data sources

Data set	Data provider	Reference
Bertelsmann Stiftung's Transformation Index (BTI)	Bertelsmann Stiftung	< https://bti-project.org >
Bjørnskov-Rode Regime Data (BRRD)	Bjørnskov and Rode	< http://www.christianbjoernskov.com/bjoernskovrodedata >
Child Mortality Estimates (CME)	UN Inter-agency Group for Child Mortality Estimation	< https://childmortality.org >
CIRIGHTS	Mark, Cingranelli, and Filippov	< https://cirights.com >
Civil Liberties Dataset (CLD)	Møller and Skaaning	< http://ps.au.dk/forskning/forskningsprojekter/dedere/datasets >
Food and Agricultural Organization of the United Nations (FAO) Food Balances	Food and Agricultural Organization of the United Nations (FAO)	< https://www.fao.org/faostat/en/#data/FBS >
Freedom in the World	Freedom House	< https://freedomhouse.org/report/freedom-world >
Freedom on the Net	Freedom House	< https://freedomhouse.org/report/freedom-net >
Global Educational Attainment Distributions	Institute for Health Metrics and Evaluation (IHME)	< https://ghdx.healthdata.org/record/ihme-data/global-educational-attainment-distributions-1970-2030 >
Global Gender Gap Report	World Economic Forum	< https://www.weforum.org/reports/global-gender-gap-report-2022 >
Global Media Freedom Dataset (MFD)	Whitten-Woodring and Van Belle	< https://faculty.uml.edu/Jenifer_whittenwoodring/MediaFreedomData_000.aspx >
International Country Risk Guide (ICRG)	Political Risk Services	< http://epub.prsgroup.com/products/icrg >
Lexical Index of Electoral Democracy (LIED)	Skaaning, Gerring and Bartusevičius	< http://ps.au.dk/forskning/forskningsprojekter/dedere/datasets >
Political Terror Scale (PTS)	Gibney, Cornett, Wood, Haschke, Arnon and Pisanò	< http://www.politicalterrorscale.org >
Polity5	Marshall, Jaggers and Gurr	< http://www.systemicpeace.org/inscrdata.html >
United Nations Educational, Scientific and Cultural Organization (UNESCO) statistics	UNESCO	< http://data.uis.unesco.org >
United Nations E-Government Survey	UN Department of Economic and Social Affairs	< https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2022 >

Table 1.1. Data sources (cont.)

Data set	Data provider	Reference
Varieties of Democracy dataset	V-Dem Project	< https://www.v-dem.net >
Voter Turnout Database	International IDEA	< https://www.idea.int/data-tools/data/voter-turnout >
World Population Prospects (WPP)	UN Department of Economic and Social Affairs Population Division	< https://population.un.org/wpp >

Chapter 2

COVERAGE

The unit of observation for International IDEA's Global State of Democracy Indices is the country-year. The 2022 release of the data set contains data for 174 countries for up to 48 years, giving a total of 7,830 country-years. Details of the spatial and temporal coverage of the data set are presented in the following sections.

SPATIAL COVERAGE

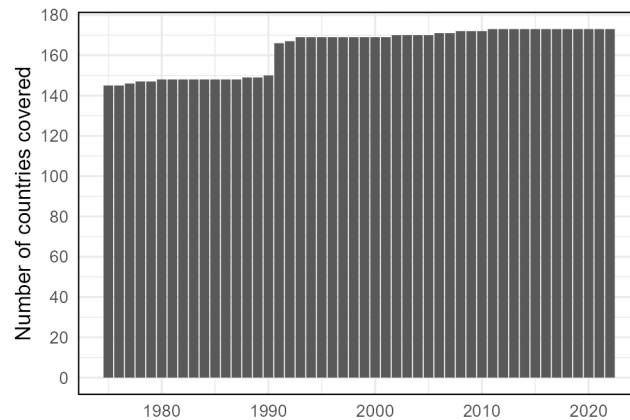
International IDEA's GSoD Indices provide data for almost all the independent countries in the world with a population in 2022 of at least 250,000 people. Countries are included in the data set from 1975 or, if the country was not independent in 1975, the year it gained independence (see Step 2). The data set does not include semi-sovereign units such as Somaliland. Countries that have been dissolved remain in the data set until they cease to exist. Using these inclusion rules, the data set is composed of 174 countries. The only country that has exited the data set is the German Democratic Republic, which was dissolved in 1990 after unification with the Federal Republic of Germany.

A complete list of the 174 countries included in the GSoD Indices data set is provided in Table B.1 (see Annex B).

TEMPORAL COVERAGE

The seventh edition of International IDEA's GSoD Indices covers the period 1975–2022. The data set covers the period since the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights took effect in 1976, using 1975 as a reference point.

Figure 2.1. Temporal coverage of International IDEA's Global State of Democracy Indices, 1975–2023



Source: International IDEA

Moreover, the data set starts with a period that is often referred to as ‘the third wave of democratization’ (Huntington 1991) in the democratization literature.

The number of countries covered each year by the GSoD Indices is shown in Figure 2.1, while Table B.1 (see Annex B) indicates the temporal coverage for each of the 174 countries included in the data set.

GEOGRAPHICAL REGIONS

International IDEA's GSoD Indices also include aggregated values at the regional and subregional levels. The regional definitions follow closely those developed by International IDEA for The Global State of Democracy (see International IDEA 2017), which creates regions based on a geographical criterion while also taking account of the cultural and historical links among countries that belong to the same subregion or region. In total, aggregated values are presented for a total of five regions and 18 subregions:

1. Africa (East Africa, Central Africa, North Africa, Southern Africa, and West Africa)
2. Americas (Caribbean, Central America, Northern America, and South America)
3. Asia and the Pacific (Central Asia, East Asia, South Asia, South-East Asia, and Oceania)
4. Western Asia
5. Europe (Central Europe, Eastern Europe, Southern Europe, and North/Western Europe)

It should be noted that the values in the data set are aggregated without using population weights. Table B.2 (see Annex B) contains a complete list of the regions and subregions, as well as their membership.

REGIONAL ORGANIZATIONS

International IDEA's GSoD Indices also contain aggregated values for five regional and international organizations: the African Union (AU), the Association of South East Asian Nations (ASEAN), the European Union (EU), the Organisation for Economic Co-operation and Development (OECD) and the Organization of American States (OAS).

As in the case of the geographical regions, the values in the data set are aggregated without using population weights. A complete list of the regional organizations and their membership is given in Table C.1. (see Annex C).

Step 2: Preparing the data sources for merger

Once the coverage of the GSoD Indices had been established (174 countries, and the period 1975–2022), the next step was to prepare the various data sources used to be merged into a single data set.

The input data were subsetted to include only the country-years covered by the GSoD Indices. For example, the German Democratic Republic ceased to exist during the covered period so the country-years after its dissolution were deleted. In other cases, such as the former Soviet republics, the countries were formed during the period covered. The country-years before these countries gained independence were therefore deleted. After excluding all these country-years, the country-year matrix contained 7,830 country-years. In all cases, a standard procedure for successor states was used, broadly following the procedures of the Varieties of Democracy project. Czechia is the successor of Czechoslovakia, Russia is the successor of the Soviet Union, Serbia is a successor of Yugoslavia and so on. For a detailed description of this procedure see Coppedge et al. (2016b).

Since the different data sources came in different forms, a common set of identifying variables was created for each of the 20 data sources: the year and a country code. The numeric codes from the Correlates of War (COW code) were used for the country code variable. Some data sources, such as V-Dem, already included this variable but it had to be created for other data sources based on the name or abbreviation of the country. In the final version of the dataset, these identifiers are

complemented by a country-year variable that was created by concatenating the values from the country-code variable (of between 2 and 920) with the values for the year variable (from 1975 to 2022). This resulted in a country-year variable with a value from 21975 to 9202022, which uniquely identifies each combination of country and year in the data set.

In some cases, the data sources also had to be put into country-year format. The International Country Risk Guide (ICRG) data set, for instance, comes in a wide format that had to be transformed into the long format by transposing the variable years into country-years.

The GSoD Indices data set also includes mean values for geographical regions and subregions, treating them as units within the dataset. To facilitate analysis, codes for the regions and subregions were added to the variable indicating the country codes. These are additional to the country codes based on the COW codes. The codes from 971 to 989 were reserved for the geographical subregions, while the codes from 991 to 996 were reserved for the geographical regions and code 999 reserved for the whole world. The same approach was used for the regional organizations included in the data set. Codes 961 to 965 were reserved for them. Unique country-year identifiers were also constructed for these additional regions and regional organizations by concatenating their codes and the years. For more details about the codes reserved for the geographical regions and subregions and for the regional organizations see the GSoD Codebook (Tufis and Hudson 2023).

Chapter 3

INDICATORS

The GSoD Indices conceptual framework guided the selection of the indicators to be included in the data set. The indicators rely on various types of sources and are collected from extant data sets compiled by different organizations and researchers. The main priority in the selection of indicators was a high level of concept–measure consistency, or the extent to which the indicators really capture the core meaning of the particular concepts in question. In addition, the aim wherever possible was to select multiple indicators for each subattribute—especially where an adequate observable indicator was not available.

Assuming the selection of high-quality indicators, a cumulative approach to measurement generally improves confidence in the scores since it utilizes the combined efforts of various data providers in order to make the resulting measures more nuanced and reliable. The use of different indicators enables the capture of related, but nonetheless distinct, aspects of the features to be measured. It also tends to reduce the influence of idiosyncratic measurement errors associated with individual indicators. Finally, drawing on several indicators makes it possible to assess the level of agreement between indicators and use this information to calculate uncertainty estimates for the Indices (see Pemstein, Meserve and Melton 2010; Fariss 2014).

Each of the 157 indicators selected from the 20 data sources corresponds to one of the subattributes or attributes of democracy developed for International IDEA's GSoD Indices. Table D.1 links a complete list of the indicators to the attributes and subattributes. Table D.2 presents information about the source for each indicator. Finally, Table D.3 summarizes the coverage and missing data for each indicator (see Annex D). There is an extensive discussion on the selection of indicators in Skaaning (2023), while detailed information on each of the indicators is available in Tufis and Hudson (2023).

Step 3: Preparing the indicators for aggregation

All the indicators selected for inclusion in International IDEA's GSoD Indices have been put through a process of data cleaning to ensure that the data is correct and follows the country–year format. The GSoD Codebook indicates for each indicator whether it was changed in any way from the original data and, if so, lists the specific changes. Only the types of changes made to prepare the indicators are set out below. These can be grouped into three main categories: (a) recoding the data; (b) interpolation of data; and (c) computing the data for geographical regions and subregions, and regional organizations included in the data set.

Different types of recoding procedures were used for different indicators in order to prepare them for calculating the GSoD Indices. First, in some cases, the original data included specific codes for missing values. All the specific codes for missing values were recoded as system missing, indicating that the value for that variable for the particular country–year is not available.

Second, for all those variables that were measured on an interval-level scale and that were aggregated using item response theory (IRT) models, the original variables were recoded into ordinal-level variables. For more details about the aggregating procedures used see Skaaning (2023: section 3.4). The recoding was done by grouping the original data into 20 categories, each of five percentiles. In this way, interval-level variables ranging from approximately –3.5 to approximately 3.5 were recoded into ordinal-level variables ranging from 1 (the first category, comprised of the bottom five percentiles) to 20 (the last category, comprised of the top five percentiles).

Third, some indicators had categories with very few cases (country–years). As a general rule, categories with less than 1 per cent of the data were recoded into adjacent categories (see the Codebook). Fourth, in some cases the scale was inverted so that all indicators included in an index run in the same direction, with low

values indicating absence or low levels of an attribute and high values indicating presence or high levels of an attribute.

With respect to interpolating the data—that is, replacing missing values with reasonable estimates of values in order to increase the coverage of an indicator—different approaches were used, depending on the characteristics of the specific indicator being analysed.

Two different types of interpolation were used for indicators from data sources that did not code the data every year. For indicators related to electoral processes, the values from the election year were duplicated for the remaining years in the electoral cycle. For instance, the value observed for voter turnout in a particular country in 1976 was used for the remaining years in the electoral cycle, 1977, 1978 and 1979, until a new election was held with a new observed value for voter turnout in 1980. For other indicators, which were measured at various time intervals and where the phenomenon being measured is likely to change only slowly, linear interpolation was used from one measurement to the next, assuming a linear process of change over time. In the case of literacy, where there is a great deal of missing data (for example, one observation every ten years), Stineman interpolation was used to approximate the missing values between valid observations.

Finally, the values for all the indicators had to be computed for the geographical regions and subregions, and the regional organizations included in the GSoD Indices data set. Data for these additional units was not available from the original data sources. A simple approach was used, taking averages for each country–year of the values of the indicator for all the countries belonging to the region (or subregion) and regional organization. It should be noted that population weights were not used during the averaging, so each country is weighted equally.

Chapter 4

ASSESSING THE UNIDIMENSIONALITY OF THE INDICES

Both this step and the following step translate the theoretical links between the attributes and subattributes, and between the subattributes and indicators, into corresponding aggregation formulas. The GSoD framework is based on the assumption that the more the principles are met, the more democratic a political system is. Thus, the achievement of these principles is not seen as an either/or matter, but as a matter of degree. The choice made of the measurement process—to construct Indices with relative, fine-grained scales and uncertainty estimates but without substantive thresholds—also aligns better with this gradualist perspective than crisp distinctions.

Reflective aggregation models and formative aggregation models were used to combine the various indicators into composite Indices. Where indicators of the theoretical constructs reflected a common underlying variable and/or generally showed very high levels of covariation, aggregation based on item response theory (IRT) models or Bayesian factor analysis (BFA) was used. For a detailed discussion of the distinction between formative and reflective indicators, and for detailed descriptions of the aggregation methods used, see Skaaning (2023).

It should be noted that, regardless of the aggregation method used, the goal in all cases was the same: to use the information contained in multiple indicators that are measuring different facets of the same phenomenon to construct an index that measures better than its composing indicators the phenomenon that is to be measured. Both IRT and BFA are data reduction procedures that combine the various interrelated indicators into a single measure.

Many of the selected indicators were expected to cluster in meaningful ways and to tap into a limited number of overarching concepts. These expectations were based on theoretical grounds and because previous dimensionality analyses of these (and related) indicators have shown that many of them are highly correlated and reflect common latent dimensions (see e.g. Skaaning 2009; Møller and Skaaning 2014a, 2014b; Teorell et al. 2016).

ITEM RESPONSE THEORY (IRT)

IRT modelling was used at the lowest level of aggregation (subattribute or subcomponent level) if there was a significant amount of missing data (more than 5 per cent) in any of the indicators used to reflect the concept in question. This allowed use of multiple indicators of the same latent concept ‘to identify and correct for measurement error, and to quantify confidence in the reliability of our estimates’ (Pemstein et al. 2015: 30). A lack of overlap in the coverage of indicators does not result in missing values in estimates for the affected country–years, as would be the case if using factor analysis. Using full information maximum likelihood IRT models means that all the relevant information from the indicators can be used. The missing data in some indicators are then reflected in the uncertainty estimates, which also reflect the level of agreement between indicator scores, or the extent to which they are correlated. If none of the indicators provides data for a given country–year, no estimate is calculated for this country–year. The *mirt* package developed by Philip Chalmers (2020) was used to conduct the modelling.

BAYESIAN FACTOR ANALYSIS (BFA)

If there is virtually perfect overlap in the measures, then BFA becomes a more viable option. Like IRT models, BFA provides point estimates for the latent dimension and confidence intervals, but it does so only for country–years with uniform indicator coverage. BFA was therefore used to combine indicators only if all of them had a low level of missing data. Moreover, when applicable, BFA was used to combine subcomponent scores into subattribute scores, and thereafter subattribute scores into attribute scores (i.e. if the measures were expected to reflect the same latent concept in the framework, and when the indicators/Indices to be aggregated showed very strong correlations). For BFA the *MCMCpack* package in R was used (Martin, Quinn and Park 2020).

FORMATIVE APPROACH

When indicators are understood as constitutive components of the concept of interest, this means that the indicators are not necessarily highly correlated. Here, the use of a formative approach is more plausible. Formative models were used in the GSoD framework when a particular version of the procedure was judged to be more appropriate than purely reflective procedures. Hence, a formative model was used to combine the contestation index with an inclusiveness indicator to create the Representation index, and a formative model was also used to aggregate indicators related to Local Democracy (see Step 5: Aggregating the indicators into Indices).

Step 4: Assessing the unidimensionality of Indices

Aggregating multiple indicators into a single index rests on the assumption that the indicators are interrelated, and that they are measuring different manifestations/forms of the same phenomenon. These assumptions, however, have to be tested and confirmed before proceeding with constructing the Indices. Four different ways were used to test the assumption or verify that the indicators could be combined into Indices.

First, the bivariate correlations among all the indicators included in an index were computed for all the Indices. There was an expectation that all the indicators included in an index would be interrelated (correlated), which indicates that they are measuring some aspect of the phenomenon that the index is supposed to measure. The correlation tables are presented in Annex F. Most of the indicators are highly to very highly correlated with the other indicators belonging to the same index. The correlations usually range from 0.6 to 0.9, and most of them are higher than 0.8. Some indicators display only medium correlations of around 0.4 to 0.5, but these are few in number and there are theoretical reasons for keeping them as part of the construction of the index.

Second, high correlations among the indicators are necessary, but not sufficient for constructing the Indices. Since the goal is to construct one index for each of the main attributes of democracy, the indicators that are

included in an index have to be related in such a way that they measure the same attribute (a single factor). Thus, a number of factor analyses were computed that allow one of up to three factors to be extracted, depending on the number of indicators included in the index (The results of these analyses are not shown but are available on request). In all cases, the single factor solution was better than possible two- or three-factor solutions, suggesting that the Indices can be reduced to a single dimension.

Third, Bayesian factor analyses were computed, asking for single factor extraction for all the Indices. The results of these analyses (see Annex E) show that the indicators have very high loadings on the Indices to which they belong.

Fourth, for each index the Cronbach's Alpha coefficient was also computed to assess the internal consistency of the indicators as a group. The smallest value recorded for Cronbach's Alpha was 0.72, while 19 of the 26 Indices for which this measure is relevant had a Cronbach's Alpha higher than 0.90. All but two of the values were above the usually accepted threshold of 0.80.

All the results discussed above support the argument that the indicators reflect common latent dimensions where they are expected to do so, which justifies aggregating them into a single index.

Chapter 5

AGGREGATING THE INDICATORS INTO INDICES

As indicated in Chapter 4, two different methods were used to aggregate indicators into Indices: IRT and BFA. The choice between the two methods was determined solely by the proportion of missing values in the indicators included in each index. First, the indicators for the five subcomponents belonging to the Civil Liberties subattribute and for the two belonging to the Political Equality subattribute were aggregated and the estimates saved in the data set. The indicators for the subattributes of democracy were then aggregated and saved in the data set.

In the case of the two subattributes discussed above—Civil Liberties, and Political Equality—which are composed of subcomponents that include indicators, the indicators were first aggregated into subcomponents and the subcomponents then into subattributes.

When using IRT as an aggregating procedure, the scores were estimated using the `mirt` package in R. Box 5.1 is an example of the syntax used to estimate the scores. The `mirt` package gives two estimates for each index—the estimate and its standard error for each country–year that has at least one valid value on the indicators that compose the index. The estimates and their standard errors are saved in an output file and then imported into the data set where they can be used for additional computations if needed.

When using BFA as an aggregating procedure, the scores were estimated using the `MCMCpack` package in R, more specifically the `MCMCfactanal` command. Box 5.2 provides an example of the syntax used to estimate the scores. For each index, the `MCMCpack` package gives two estimates, the estimate and its standard error, for each country–year that has valid values on all the indicators that compose the index. The estimates and their standard errors are saved in an output file and then imported into the data set, where they can be used for additional computations if needed.

The aggregation rules used for each subcomponent, subattribute and attribute computed are shown in Table 5.1.

Box 5.1. Syntax for aggregating indicators into Indices using IRT

```
library(mirt) # load the mirt library
### 1.3. IRT: Free political parties # estimate subattribute 1.3
starttime <- Sys.time()
# Select all cases that have values on at least one variable
SD13score <- subset(Scoresv01, !is.na(v_13_01) | !is.na(v_13_02) |
  !is.na(v_13_03) | !is.na(v_13_04) | !is.na(v_13_05) |
  !is.na(v_13_06))
nrow(SD13score) # Check the number of cases
# Run the model and compute the scores
SD13irt <- mirt(SD13score[,17:22], 1, itemtype = 'graded', technical =
  list(NCYCLES = 5000))
Scores_SD13 <- fscores(SD13irt, method = 'MAP', full.scores = TRUE,
  full.scores.SE = TRUE)
# Save the scores
SD13_save <- cbind(SD13score[,1:7], Scores_SD13)
# Export the scores
write.csv(SD13_save, file = "SD13_save.csv")
endtime <- Sys.time()
timetaken_SD13 <- endtime-starttime
```

Note: Text in italics represents the names of the variables and files. For more detail on the options for the procedures used see Chalmers (2020).

Box 5.2. Syntax for aggregating indicators into Indices using BFA

```
library(MCMCpack) # load the MCMCpack library
# 2.2.A. BFA: Freedom of expression
starttime <- Sys.time()
# Run the model and compute the scores
SD22a <- MCMCfactanal(~v_22_01 + v_22_02 + v_22_03 + v_22_04 + v_22_05 +
  v_22_06 + v_22_07, factors = 1, lambda.constraints = list(),
  data = Scoresv01, burnin = 5000, mcmc = 100000, thin = 100,
  verbose = 1000, seed = NA, lambda.start = NA, psi.start = NA,
  l0=0, L0=0, a0=0.001, b0=0.001, store.scores=TRUE, std.var =
  TRUE)
# Save and export the scores
capture.output(summary(SD22a), file = "SD22a_score.txt")
#summary(SD22a)
endtime <- Sys.time()
timetaken_SD22a <- endtime-starttime
system("Say Oh, most wonderful, your data analysis is complete")
```

Note: Text in italics represents the names of the variables and files. For more detail on the options for the procedures used see Martin, Quinn and Park (2020).

Table 5.1. Aggregation rules for the creation of Indices at the attribute and subattribute levels

Attribute	Aggregation	Subattribute	Aggregation
1. Representation (free and equal access to political power)	Bayesian factor analysis of credible elections, free political parties, elected government, effective parliament, and local democracy to create contestation index; thereafter, multiplication of contestation and inclusive suffrage	1.1. Credible Elections	Item response modelling
		1.2. Inclusive Suffrage	Weighted average
		1.3. Free Political Parties	Item response modelling
		1.4. Elected Government	Item response modelling
		1.5. Effective Parliament	Item response modelling
		1.6. Local Democracy	Multiplication
2. Rights (individual liberties and resources)	Bayesian factor analysis	2.1. Access to Justice	Item response modelling
		2.2. Civil Liberties	First item response modelling by subcomponents (i.e. freedom of expression [IRT], freedom of the press [IRT], freedom of association and assembly [IRT], freedom of religion [IRT], and freedom of movement [IRT]). Thereafter, Bayesian factor analysis of subcomponent indices.
		2.3. Basic Welfare	Item response modelling
		2.4. Political Equality	First item response modelling by subcomponents (i.e. social group equality and gender equality). Thereafter, Bayesian factor analysis of subcomponent indices.
3. Rule of Law (predictable and equal enforcement of the law, and limitation of government power)	Bayesian factor analysis	3.1. Judicial Independence	Item response modelling
		3.2. Absence of Corruption	Item response modelling
		3.3. Predictable Enforcement	Item response modelling
		3.4. Personal Integrity and Security	Item response modelling
4. Participation (instruments for realization of political involvement)	Item response modelling	4.1. Civil Society	Item response modelling
		4.2. Civic Engagement	Item response modelling
		4.3. Electoral Participation	N/A (only one indicator)

Step 5: Aggregating the indicators into Indices

Representation: As the data series for many of the indicators begins after 2000, four of the six subattributes were aggregated using IRT. The Inclusive Suffrage subattribute was computed as a weighted average of its two indicators. The Local Democracy index is computed through a multiplication of the two source indices. In a final step, all the country–years without an electoral regime according to V-Dem were scored the minimum value of 0.

The Inclusive Suffrage indicator was combined with the other five subattribute to construct an overall Representation index but only after the construction of an ‘intermediate’ index based on the other subattribute Indices. Inspired by Dahl’s theoretical distinction between two dimensions of representative government—contestation and inclusion (1971; 1989; see also Coppedge, Alvarez and Maldonado 2008; Miller 2015)—the factor scores from a BFA were first used to construct a contestation index. Thereafter, a formative aggregation procedure was chosen to combine the contestation index with the suffrage measure. Although contestation and inclusion are not highly correlated, they both constitute necessary conditions for representative government. Accordingly, the representation index is based on a multiplication of the suffrage scores and the contestation index (both first re-scaled to vary between zero and one).

Rights: Much like the subattributes of Representation, there is incomplete coverage in the source indicators

for Rights. Therefore, both Access to Justice and Basic Welfare indices were estimated through IRT. Regarding the second subattribute of Rights—Civil Liberties—all five subcomponent indices were constructed using IRT. In the next step, BFA was used to reduce the highly correlated subcomponents into a single index score for the Civil Liberties subattribute. IRT was used to construct the three subcomponents of the Political Equality subattribute, which were then combined in the subattribute using BFA. Finally, the four Rights subattributes were aggregated into the Rights index using BFA.

Rule of Law: As with the other attributes, the subattributes scores were estimated with IRT modelling, as incomplete temporal coverage in source indicators prevents the use of BFA. These subattribute scores were then used to estimate the Rule of Law index using a BFA model.

Participation: As with the other attributes, incomplete temporal coverage in source indicators prevents the use of BFA for the subattribute scores. The first two subattributes (Civil Society and Civic Engagement) were estimated using IRT. The Electoral Participation score is simply the reported turnout as a percentage of the voting age population and requires no further calculations. The three subattribute scores were then used to estimate the Participation index using a IRT model.

Chapter 6

SCALING

All the Indices in the data set offer nuanced scores in the form of interval scale measurement. The Indices have been normalized (step 6) to range from 0 (lowest achievement among all the country-years) to 1 (highest achievement among all the country-years). A score of 0 generally refers to the worst performance in the whole sample of country-years covered by a particular index, while 1 refers to the best country-year performance in the sample. For a number of Indices, however, 0 also has an absolute meaning as the lowest score that is theoretically possible. The subattribute Indices capturing Credible Elections, Elected Government, Direct Democracy and Local Democracy all have substantively meaningful minimum values that refer to the total absence of the features in question.

Step 6: Scaling the Indices

The normalization of the Indices was carried out by subtracting for each country-year the minimum score for the index from the value of the country-year and by dividing the result by the difference between the maximum and the minimum value of the index. The formula used for the normalization of the Indices was:

$$x'i = (xi - \min(xi)) / (\max(xi) - \min(xi))$$

where x_i represents the value of index x for country-year i , while $x'i$ represents the normalized value of index x for country-year i .

In this way, the lowest value in the population of country-years in the data set becomes 0, while the highest value in the same population of country-years in the data set becomes 1, and all the remaining country-years are given values between these two values.

Chapter 7

CONFIDENCE INTERVALS

For most indices, the yearly scores for each country are accompanied by uncertainty estimates, which can be used to assess whether differences between countries and within countries over time are significant. These uncertainty estimates, in the form of confidence intervals or margins of error, reflect the statistically likely range for the country-year index scores based on the indicators used.

The GSoD Indices confidence levels refer to one standard deviation below and above the estimated score. This means that about 68 per cent of the 'true' values would be found within these intervals. Confidence intervals are only available for those Indices that are constructed from multiple indicators. The more the underlying indicators are in agreement regarding the scoring (high-low) of a particular aspect of democracy, the narrower the confidence intervals. The more the underlying indicators are in disagreement, the wider the confidence intervals.

If the confidence levels overlap when comparing the scores for two or more countries on the same GSoD (attribute) index, the difference between the scores is less than two standard deviations and is therefore not statistically significant at the $p=0.05$ level. Similarly, overlapping confidence intervals for different years when comparing the scores of one country for a particular GSoD index also indicates that the difference is statistically insignificant. More generally, short-term fluctuations are hard to capture and should be interpreted with caution, while it is usually possible to be certain about longer-term trends.

Step 7: Computing the confidence intervals

Confidence intervals were computed by subtracting or adding the standard error from the estimated score. The lower bound of the 68 per cent confidence interval was computed by subtracting the standard error from the estimated score of the index, while the upper bound of the 68 per cent confidence interval was computed by adding the standard error to the estimated score of the index. These values were saved in the data set so that each index is represented by three different values:

the point estimate and the two limits of the confidence interval. Confidence intervals have been computed for all the attributes and subattributes of democracy with the exception of Electoral Participation (4.3), which is composed of a single indicator, and the Inclusive Suffrage (1.2), Direct Democracy (0.0) and Local Democracy (1.6) subattributes, which are aggregated using a formative formula.

Chapter 8

VALIDITY CHECKS

A series of validity checks was run throughout the process of constructing the GSoD Indices to verify that they truly measure what they are thought to be measuring. Comparisons with extant measures should indicate a high degree of correspondence between the GSoD measures and existing measures of the same phenomena.

Step 8: Validity checks

As discussed in Step 4, the dimensionality of each index was tested by running bivariate correlations for the indicators included in the index, various factor analyses and computing Cronbach's Alpha coefficients. The correlation coefficients are shown in Annex F and the data from the dimensionality tests in Annex E.

In addition to the unidimensionality tests discussed above, a second type of validity check compared extant measures that attempt to capture relatively similar aspects of democracy at the attribute, subattribute or subcomponent levels. These measures were taken from eight large-scale data collection projects: the Bertelsmann Transformation Index (Bertelsmann Stiftung, various years); the Democracy Index (Economist Intelligence Unit 2016); the Freedom in the World survey (Freedom House 2016); the Perceptions of Electoral Integrity (PEI) data (Norris et al. 2016); Polity V data (Marshall and Gurr 2020); the Worldwide Governance Indicators (Kaufmann and Kraay 2010); the Rule of Law Index (World Justice Project 2016); and the Varieties of Democracy (Coppedge et al. 2020). For a summary of these data sets see Table G.1 in version 4 of the Technical Procedures Guide (Tufis 2020).

Assuming that the extant measures are valid, high correlations would indicate that the GSoD Indices are also valid. If the extant measures are based on similar or the same information, high correlations would indicate that the GSoD Indices are reliable. However, correlations should be interpreted with caution since none of the extant measures are perfect and many of them capture slightly different concepts compared to the GSoD Indices.

An additional validity check conducted for both indicators and Indices as constructed at various levels of aggregation was to plot the indicators and Indices over time for each country in the data set and visually check their validity using country-specific expertise. This allowed easy identification of whether the Indices constructed corresponded to or contradicted team-based knowledge of the situation in a particular country.

Finally, all the countries in each of the Indices were sorted at 10-year intervals (1975, 1985, 1995, 2005 and 2015) to check again the face validity of the Indices by comparing their relative position at these times, as well as the changes in their relative position over time, to confirm that these conformed with existing knowledge of the evolution of different countries over the period.

CONCLUSION

This Guide presents the technical procedures used to construct International IDEA's Global State of Democracy Indices to provide a guide for those who want a better understanding of how the Indices were constructed and, eventually, for those who want to use, modify or build on the Indices. It provides a detailed step-by-step description of the procedures used, allowing the interested reader to follow each step.

It should be noted that this technical methodology only provides information about the method used to construct the Indices. The information presented in this document builds on and is complemented by an elaborate discussion of the conceptual background to the Indices in the GSoD Indices methodology (Skaaning 2023). If the reader is interested in a particular indicator used, more information is available in the GSoD Codebook (Tufis and Hudson 2023). These three documents taken together provide complete information on the GSoD Indices.

The Annexes present additional information that some readers or users of the GSoD Indices might find useful, including a complete list of the data sets used as data sources (Annex A); a list of the countries, regions and subregions in the GSoD data set (Annex B); a list of the regional organizations included in the GSoD data set (Annex C); the attributes, subattributes and indicators included in the GSoD data set (Annex D); and the results of the unidimensionality and validity tests performed during the creation of the GSoD data set (Annexes E and F).

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Annex A. Sources

Table A.1. Data sets used for collecting indicators

Data set name	Data type	No. of indicators	Spatial coverage	Temporal coverage
Bertelsmann Transformation Index	ES	16	140 countries	2006–2022
Bjørnskov Rode	IC	1	208 countries	1950–2022
CIRIGHTS	IC	10	195 countries	1981–2020
Civil Liberties Dataset	IC	5	204 countries	1975–2022
Freedom in the World	ES	23	211 countries	2012–2022
Freedom on the Net	ES	3	71 countries	2011–2022
Global Gender Gap Report	IC	1	161 countries	2006–2022
Global Media Freedom Dataset	IC	1	166 countries	1975–2022
Institute for Health Metrics and Evaluation	OD	2	195 countries	1970–2030
International Country Risk Guide	ES	4	146 countries	1984–2022
International IDEA Electoral Processes	OD	1	202 countries	1945–2023
Lexical Index of Electoral Democracy	IC, OD	3	242 countries	1789–2022
Political Terror Scale	IC	1	173 countries	1976–2022
Polity	IC	4	194 countries	1776–2022
UN Food and Agriculture Organization	OD	1	186 countries	1961–2020
UN Inter-agency Group for Child Mortality Estimation	OD	1	196 countries	1960–2022
UN World Population Prospects	OD	1	212 countries	1960–2022
UNESCO Institute for Statistics	OD	1	166 countries	1970–2022
United Nations E-Government Survey	ES	1	193 countries	2003–2022
V-Dem	ES	79	202 countries	1789–2022

Notes: ES = expert surveys; IC = standards-based in-house coding; OD = observational data; CM = composite measures.

Annex B. Countries, regions and subregions included in International IDEA's GSoD Indices

Table B.1. List of countries included in International IDEA's GSoD Indices

Country	First Year	Last Year	Country-years
Afghanistan	1975	2022	48
Albania	1975	2022	48
Algeria	1975	2022	48
Angola	1975	2022	48
Argentina	1975	2022	48
Armenia	1991	2022	32
Australia	1975	2022	48
Austria	1975	2022	48
Azerbaijan	1991	2022	32
Bangladesh	1975	2022	48
Barbados	1975	2022	48
Belarus	1991	2022	32
Belgium	1975	2022	48
Benin	1975	2022	48
Bhutan	1975	2022	48
Bolivia	1975	2022	48
Bosnia and Herzegovina	1992	2022	31
Botswana	1975	2022	48
Brazil	1975	2022	48
Bulgaria	1975	2022	48
Burkina Faso	1975	2022	48
Burundi	1975	2022	48
Cambodia	1975	2022	48
Cameroon	1975	2022	48

Country	First Year	Last Year	Country–years
Canada	1975	2022	48
Cabo Verde	1975	2022	48
Central African Republic	1975	2022	48
Chad	1975	2022	48
Chile	1975	2022	48
China	1975	2022	48
Colombia	1975	2022	48
Comoros	1975	2022	48
Congo	1975	2022	48
Costa Rica	1975	2022	48
Côte d'Ivoire	1975	2022	48
Croatia	1991	2022	32
Cuba	1975	2022	48
Cyprus	1975	2022	48
Czechia	1975	2022	48
Democratic People's Republic of Korea	1975	2022	48
Democratic Republic of the Congo	1975	2022	48
Denmark	1975	2022	48
Djibouti	1977	2022	46
Dominican Republic	1975	2022	48
Ecuador	1975	2022	48
Egypt	1975	2022	48
El Salvador	1975	2022	48
Eritrea	1993	2022	30
Estonia	1991	2022	32
Eswatini	1975	2022	48
Ethiopia	1975	2022	48
Finland	1975	2022	48
France	1975	2022	48
Gabon	1975	2022	48
Gambia	1975	2022	48

Country	First Year	Last Year	Country-years
Georgia	1991	2022	32
German Democratic Republic	1975	1990	16
Germany	1975	2022	48
Ghana	1975	2022	48
Greece	1975	2022	48
Guatemala	1975	2022	48
Guinea	1975	2022	48
Guinea-Bissau	1975	2022	48
Guyana	1975	2022	48
Haiti	1975	2022	48
Honduras	1975	2022	48
Hungary	1975	2022	48
Iceland	1975	2022	48
India	1975	2022	48
Indonesia	1975	2022	48
Iran	1975	2022	48
Iraq	1975	2022	48
Ireland	1975	2022	48
Israel	1975	2022	48
Italy	1975	2022	48
Jamaica	1975	2022	48
Japan	1975	2022	48
Jordan	1975	2022	48
Kazakhstan	1991	2022	32
Kenya	1975	2022	48
Kosovo	2008	2022	15
Kuwait	1975	2022	48
Kyrgyzstan	1991	2022	32
Lao People's Democratic Republic	1975	2022	48
Latvia	1991	2022	32
Lebanon	1975	2022	48

Country	First Year	Last Year	Country-years
Lesotho	1975	2022	48
Liberia	1975	2022	48
Libya	1975	2022	48
Lithuania	1991	2022	32
Luxembourg	1975	2022	48
Madagascar	1975	2022	48
Malawi	1975	2022	48
Malaysia	1975	2022	48
Maldives	1975	2022	48
Mali	1975	2022	48
Malta	1975	2022	48
Mauritania	1975	2022	48
Mauritius	1975	2022	48
Mexico	1975	2022	48
Mongolia	1975	2022	48
Morocco	1975	2022	48
Mozambique	1975	2022	48
Myanmar	1975	2022	48
Namibia	1990	2022	32
Nepal	1975	2022	48
Netherlands	1975	2022	48
New Zealand	1975	2022	48
Nicaragua	1975	2022	48
Niger	1975	2022	48
Nigeria	1975	2022	48
North Macedonia	1991	2022	32
Norway	1975	2022	48
Oman	1975	2022	48
Pakistan	1975	2022	48
Palestine	1988	2022	35
Panama	1975	2022	48

Country	First Year	Last Year	Country–years
Papua New Guinea	1975	2022	48
Paraguay	1975	2022	48
Peru	1975	2022	48
Philippines	1975	2022	48
Poland	1975	2022	48
Portugal	1975	2022	48
Qatar	1975	2022	48
Republic of Korea	1975	2022	48
Republic of Moldova	1991	2022	32
Romania	1975	2022	48
Russian Federation	1975	2022	48
Rwanda	1975	2022	48
Saudi Arabia	1975	2022	48
Senegal	1975	2022	48
Serbia	1975	2022	48
Sierra Leone	1975	2022	48
Singapore	1975	2022	48
Slovakia	1993	2022	30
Slovenia	1991	2022	32
Somalia	1975	2022	48
South Africa	1975	2022	48
South Sudan	2011	2022	12
Spain	1975	2022	48
Sri Lanka	1975	2022	48
Sudan	1975	2022	48
Suriname	1975	2022	48
Sweden	1975	2022	48
Switzerland	1975	2022	48
Syrian Arab Republic	1975	2022	48
Taiwan	1975	2022	48
Tajikistan	1991	2022	32

Country	First Year	Last Year	Country-years
Tanzania	1975	2022	48
Thailand	1975	2022	48
Timor-Leste	2002	2022	21
Togo	1975	2022	48
Trinidad and Tobago	1975	2022	48
Tunisia	1975	2022	48
Turkey	1975	2022	48
Turkmenistan	1991	2022	32
Uganda	1975	2022	48
Ukraine	1991	2022	32
United Kingdom of Great Britain and Northern Ireland	1975	2022	48
United States of America	1975	2022	48
Uruguay	1975	2022	48
Uzbekistan	1991	2022	32
Vanuatu	1980	2022	43
Venezuela	1975	2022	48
Viet Nam	1975	2022	48
Yemen	1975	2022	48
Zambia	1975	2022	48
Zimbabwe	1975	2022	48

Notes: The country names in this table do not represent the official position of International IDEA with regard to the legal status of, or policy on, the entities mentioned. It is a harmonization of often-divergent lists and practices.

Table B.2. Division of countries into regions and subregions as covered by the GSOD Indices

Region/subregion	Country
Africa	
East Africa	Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Tanzania, Uganda
Central Africa	Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Republic of Congo
Southern Africa	Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Zambia, Zimbabwe
West Africa	Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo
Northern Africa	Algeria, Egypt, Libya, Morocco, South Sudan, Sudan, Tunisia
Americas	
The Caribbean	Barbados, Cuba, Dominican Republic, Haiti, Jamaica, Trinidad and Tobago
Central America	Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama
South America	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela
North America	Canada, United States of America
Asia and the Pacific	
Central Asia	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
East Asia	China, Democratic People's Republic of Korea, Japan, Mongolia, Republic of Korea, Taiwan
South Asia	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
South-East Asia	Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam
Oceania	Australia, Fiji, New Zealand, Papua New Guinea, Solomon Islands, Vanuatu
Western Asia	
Western Asia	Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen
Europe	
Central Europe	Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, German Democratic Republic, Hungary, Kosovo, Latvia, Lithuania, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia

Region/subregion	Country
Eastern Europe	Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, Ukraine
North and West Europe	Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland
Southern Europe	Cyprus, Greece, Italy, Malta, Portugal, Spain, Turkey

Notes: The country names in this table do not represent the official position of International IDEA with regard to the legal status of, or policy on, the entities mentioned. It is a harmonization of often-divergent lists and practices.

Annex C. Regional organizations included in the data set

Table C.1. Regional organizations included in the data set

Regional organization	Countries
African Union (AU)	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cabo Verde, Central African Republic, Chad, Congo, Comoros, Côte d'Ivoire, Democratic Republic of the Congo (DRC), Djibouti, Egypt, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe
Association of South East Asian Nations (ASEAN)	Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam
European Union (EU)	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom
Organization for Economic Co-operation and Development (OECD)	Australia, Austria, Belgium, Canada, Chile, Colombia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Republic of Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States
Organization of American States (OAS)	Argentina, Barbados, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, United States, Uruguay, Venezuela

Annex D. Attributes, subattributes and indicators

ATTRIBUTES, SUBATTRIBUTES, ASSESSMENT QUESTIONS AND EMPIRICAL INDICATORS

Table D.1. Attribute 1. Representation

Subattributes	Assessment questions	No.	Indicators
1.1. Credible Elections	To what extent are elections free from irregularities?	1.1.1	EMB autonomy
		1.1.2	EMB capacity
		1.1.3	Election other voting irregularities
		1.1.4	Election government intimidation
		1.1.5	Election free and fair
		1.1.6	Competition
		1.1.7	A3 Electoral process
		1.1.8	B2 Political Pluralism and Participation
		1.1.9	B3 Political Pluralism and Participation
		1.1.10	Free and fair elections
1.2. Inclusive Suffrage	To what extent do all adult citizens have voting rights?	1.2.1	Suffrage
		1.2.2	Election voter registry
1.3. Free Political Parties	To what extent are political parties free to form and campaign for office?	1.3.1	Party ban
		1.3.2	Barriers to parties
		1.3.3	Opposition parties' autonomy
		1.3.4	Elections multiparty
		1.3.5	Competitiveness of participation
		1.3.6	Multiparty elections
		1.3.7	B1 Political Pluralism and Participation
		1.3.8	Party System

Subattributes	Assessment questions	No.	Indicators
1.4. Elected Government	To what extent is access to government determined by elections?	1.4.1	Elected officials index
		1.4.2	Competitiveness of executive recruitment
		1.4.3	Openness of executive recruitment
		1.4.4	Electoral
		1.4.5	A1 Electoral Process
		1.4.6	A2 Electoral Process
		1.4.7	C1 Functioning of Government
1.5. Effective Parliament	To what extent does parliament oversee the executive?	1.4.9	Lexical index of electoral democracy
		1.5.1	Legislature questions officials in practice
		1.5.2	Executive oversight
		1.5.3	Legislature investigates in practice
		1.5.4	Legislature: opposition parties
1.6. Local Democracy	To what extent are there freely elected, influential local governments?	1.5.5	Executive constraints
		1.6.1	Local government index
		1.6.2	Subnational elections free and fair

Table D2. Attribute 2. Rights

Subattributes	Assessment questions	No.	Indicators
2.1. Access to justice	To what extent is there equal, fair access to justice?	2.1.1	Access to justice for men
		2.1.2	Access to justice for women
		2.1.3	Judicial corruption decision
		2.1.4	Judicial accountability
		2.1.5	Fair trial
		2.1.6	F2 Rule of Law
		2.1.7	Civil Rights
2.2. Civil Liberties	To what extent are civil liberties respected?	Subcomponent 2.2.A: Freedom of expression	
		2.2.1	Freedom of discussion for women
		2.2.2	Freedom of discussion for men
		2.2.3	Freedom of academic and cultural expression
		2.2.4	Freedom of opinion and expression
		2.2.5	Freedom of speech and press

Subattributes	Assessment questions	No.	Indicators
		2.2.6	A. Obstacles to access
		2.2.7	B. Limits on content
		2.2.8	C. Violations of user rights
		2.2.9	D3 Freedom of Expression and Belief
		2.2.10	D4 Freedom of Expression and Belief
		2.2.11	Freedom of expression
		Subcomponent 2.2.B: Freedom of the press	
		2.2.12	Print/broadcast censorship effort
		2.2.13	Harassment of journalists
		2.2.14	Media self-censorship
		2.2.15	Critical print/broadcast media
		2.2.16	Print/broadcast media perspectives
		2.2.17	Media bias
		2.2.18	Media corrupt
		2.2.19	Media freedom INVERTED
		2.2.20	D1 Freedom of Expression and Belief
		Subcomponent 2.2.C: Freedom of association and assembly	
		2.2.21	CSO entry and exit
		2.2.22	CSO repression
		2.2.23	Freedom of peaceful assembly
		2.2.24	Freedom of association and assembly
		2.2.25	Freedom of assembly and association
		2.2.26	Worker's rights
		2.2.27	E1 Associational and Organizational Rights
		2.2.28	E2 Associational and Organizational Rights
		2.2.29	E3 Associational and Organizational Rights
		2.2.30	Association/assembly rights
		Subcomponent 2.2.D: Freedom of religion	
		2.2.31	Freedom of religion

Subattributes	Assessment questions	No.	Indicators		
		2.2.32	Religious organization repression		
		2.2.33	Freedom of thought, conscience and religion		
		2.2.34	Freedom of religion		
		2.2.35	D2 Freedom of Expression and Belief		
		Subcomponent 2.2.E: Freedom of movement			
		2.2.41	Freedom of foreign movement		
		2.2.42	Freedom of domestic movement for women		
		2.2.43	Freedom of domestic movement for men		
		2.2.44	Freedom of movement and residence		
		2.2.45	Freedom of foreign movement		
		2.2.46	Freedom of domestic movement		
		2.2.47	G1 Personal Autonomy and Individual Rights		
		2.3. Basic Welfare	To what extent is there basic welfare?	2.3.1	Infant mortality rate
				2.3.2	Life expectancy
2.3.3	Kilocalories per person per day				
2.3.4	Literacy				
2.3.5	Mean years of schooling				
2.3.6	Educational equality				
2.3.7	Health equality				
2.4. Political Equality	To what extent is there political equality?	Subcomponent 2.4.A: Social group equality			
		2.4.1	Social class equality in respect for civil liberties		
		2.4.2	Social group equality in respect for civil liberties		
		2.4.3	Power distributed by socioeconomic position		
		2.4.4	Power distributed by social group		
		2.4.5	Power distributed by sexual orientation		
		2.4.6	Exclusion by socio-economic group index		
		2.4.7	Exclusion by political group index		
		2.4.8	Exclusion by social group index		

Subattributes	Assessment questions	No.	Indicators
		2.4.9	Exclusion by urban-rural location index
		2.4.10	B4 Political Pluralism and Participation
		2.4.11	F4 Rule of Law
		2.4.12	Equal opportunity
		Subcomponent 2.4.B: Gender equality	
		2.4.13	Power distributed by gender
		2.4.14	CSO women's participation
		2.4.15	Female vs. male mean years of schooling
		2.4.16	Lower chamber female legislators
		2.4.17	Exclusion by gender index
		2.4.18	Women's political rights
		2.4.19	Women's economic rights
		2.4.20	Political empowerment

Table D3. Attribute 3. Rule of Law

Subattributes	Assessment questions	No.	Indicators
3.1. Judicial Independence	To what extent are the courts independent?	3.1.1	High Court independence
		3.1.2	Lower court independence
		3.1.3	Compliance with higher court
		3.1.4	Compliance with judiciary
		3.1.5	Independent judiciary
		3.1.6	F1 Rule of Law
		3.1.7	Separation of power
		3.1.8	Independent judiciary
3.2. Absence of Corruption	To what extent is the exercise of public authority free from corruption?	3.2.1	Public sector: corrupt exchanges
		3.2.2	Public sector theft
		3.2.3	Executive embezzlement and theft
		3.2.4	Executive bribery and corrupt exchanges
		3.2.5	Corruption
		3.2.6	C2 Functioning of Government
		3.2.7	Prosecution of office abuse

Subattributes	Assessment questions	No.	Indicators
3.3. Predictable Enforcement	To what extent is the enforcement of public authority predictable?	3.3.1	Executive respects constitution
		3.3.2	Transparent laws with predictable enforcement
		3.3.3	Rigorous and impartial public administration
		3.3.4	Criteria for appointment decisions in the state administration
		3.3.5	Criteria for appointment decisions in the armed forces
		3.3.6	Bureaucratic quality
		3.3.7	Law and order
		3.3.8	C3 Functioning of Government
		3.3.9	Monopoly on the use of force
		3.3.10	Basic administration
3.4. Personal Integrity and Security	To what extent are people free from violence?	3.4.1	Freedom from torture
		3.4.2	Freedom from political killings
		3.4.3	Political terror scale
		3.4.4	Internal conflict
		3.4.5	Physical integrity rights index
		3.4.6	G4 Personal Autonomy and Individual Rights
		3.4.7	F3 Rule of Law

Table D4. Attribute 4. Participation

Subattributes	Assessment question	No.	Indicators
4.1. Civil Society	To what extent are civil society organizations free and influential?	4.1.1	CSO participatory environment
		4.1.2	Engaged society
		4.1.3	CSO consultation
		4.1.4	EPI - E-participation Index
		4.1.5	Interest groups
		4.1.6	Social capital
4.2. Civic Engagement	To what extent do people participate in civil society organizations?	4.2.1	Engagement in independent non-political associations
		4.2.2	Engagement in independent political associations
		4.2.3	Engagement in independent trade unions
		4.2.4	Civil society traditions

Subattributes	Assessment question	No.	Indicators
4.3. Electoral Participation	To what extent do people participate in national elections?	4.3.1	Election voting age population (VAP) turnout

OVERVIEW OF INDICATORS AND SOURCES

1. Representation

1.1. Indicators of Credible Elections

No.	Indicator	Description/question	Data set
1.1.1	EMB autonomy (v2elembaut)	ES: Does the election management body (EMB) have autonomy from government to apply election laws and administrative rules impartially in national elections?	V-Dem
1.1.2	EMB capacity (v2elembcap)	ES: Does the Election Management Body (EMB) have sufficient staff and resources to administer a well-run national election?	V-Dem
1.1.3	Election other voting irregularities (v2elirreg)	ES: In this national election, was there evidence of other intentional irregularities by incumbent and/or opposition parties and/or vote fraud?	V-Dem
1.1.4	Election government intimidation (v2elintim)	ES: In this national election, were opposition candidates/parties/campaign workers subjected to repression, intimidation, violence or harassment by the government, the ruling party or their agents?	V-Dem
1.1.5	Election free and fair (v2elfrfair)	ES: Taking all aspects of the pre-election period, election day and the post-election process into account, would you consider this national election to be free and fair?	V-Dem
1.1.6	Competition (competitive elections)	IC: The chief executive offices and seats in the effective legislative body are filled by elections characterized by uncertainty, meaning that the elections are, in principle, sufficiently free to enable the opposition to gain power if they were to attract sufficient support from the electorate.	LIED
1.1.7	Electoral Process (A3)	IC: Are the electoral laws and framework fair, and are they implemented impartially by the relevant election management bodies?	Freedom in the World
1.1.8	Political Pluralism and Participation (B2)	IC: Is there a realistic opportunity for the opposition to increase its support or gain power through elections?	Freedom in the World
1.1.9	Political Pluralism and Participation (B3)	IC: Are the people's political choices free from domination by forces that are external to the political sphere, or by political forces that employ extrapolitical means?	Freedom in the World

No.	Indicator	Description/question	Data set
1.1.10	Free and fair elections (elect)	IC: Ten-point scale corresponding to answer choices that range from 'National elections, if held at all, are entirely unfree and unfair' to 'There are no constraints on free and fair elections'.	BTI

Note: ES = expert surveys; IC = standards-based in-house coding.

1.2. Indicators of Inclusive Suffrage

No.	Indicator	Description/question	Data set
1.2.1	Suffrage (v2elsuffrage)	OD: What percentage (%) of adult citizens (as defined by statute) has the legal right to vote in national elections?	V-Dem
1.2.2	Election voter registry (v2elrgstry)	ES: In this national election, was there a reasonably accurate voter registry in place and was it used?	V-Dem

Note: ES = expert surveys; OD = observational data.

1.3. Indicators of Free Political Parties

No.	Indicator	Description/question	Data set
1.3.1	Party ban (v2psparban)	ES: Are any parties banned?	V-Dem
1.3.2	Barriers to parties (v2psbars)	ES: How restrictive are the barriers to forming a party?	V-Dem
1.3.3	Opposition parties' autonomy (v2psoppaut)	ES: Are opposition parties independent and autonomous of the ruling regime?	V-Dem
1.3.4	Elections multiparty (v2elmulpar)	ES: Was this national election multiparty?	V-Dem
1.3.5	Competitiveness of participation (parcomp)	IC: The competitiveness of participation refers to the extent to which alternative preferences for policy and leadership can be pursued in the political arena.	Polity
1.3.6	Multiparty elections (multiparty legislative elections)	OD: The lower house (or unicameral chamber) of the legislature is (at least in part) elected by voters facing more than one choice. Specifically, parties are not banned and (a) more than one party is allowed to compete or (b) elections are nonpartisan (i.e., all candidates run without party labels).	LIED
1.3.7	Political Pluralism and Participation (B1)	IC: Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system free of undue obstacles to the rise and fall of these competing parties or groupings?	Freedom in the World

No.	Indicator	Description/question	Data set
1.3.8	Party System (party_sys)	IC: Ten-point scale corresponding to answer choices that range from 'There is no party system to articulate and aggregate societal interest' to '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'.	BTI

Note: ES = expert surveys; IC = standards-based in-house coding; OD = observational data.

1.4. Indicators of Elected Government

No.	Indicator	Description/question	Data set
1.4.1	Elected officials index (v2x_elecoff)	CM: Are the chief executive and legislature appointed through popular elections? Measure based on 16 variables from expert survey data, in-house coded data and observational data collected by V-Dem.*	V-Dem
1.4.2	Competitiveness of executive recruitment (xrcomp)	IC: Competitiveness refers to the extent that prevailing modes of advancement give subordinates equal opportunities to become superordinates.	Polity
1.4.3	Openness of executive recruitment (xropen)	IC: Recruitment of the chief executive is 'open' to the extent that all the politically active population has an opportunity, in principle, to attain the position through a regularized process.	Polity
1.4.4	Electoral	IC: Does a country have no regular elections, elections in an effectively one-party state, elections with opposition parties but without an actual chance of government change, or full democracy?	Bjørnskov and Rode
1.4.5	Electoral Process (A1)	IC: Was the current head of government or other chief national authority elected through free and fair elections?	Freedom in the World
1.4.6	Electoral Process (A2)	IC: Were the current national legislative representatives elected through free and fair elections?	Freedom in the World
1.4.7	Functioning of Government (C1)	IC: Do the freely elected head of government and national legislative representatives determine the policies of the government?	Freedom in the World

No.	Indicator	Description/question	Data set
1.4.9	Lexical index of electoral democracy (lexical_index_plus)	IC: We operationalize electoral democracy as a series of necessary-and-sufficient conditions arrayed in an ordinal scale. The resulting Lexical Index of Electoral Democracy (LIED). In this fashion, we arrive at an index that performs a classificatory function, each level identifies a unique and theoretically meaningful regime type, as well as a discriminating function.	LIED

Note: IC = standards-based in-house coding; CM = composite measures.

The 16 variables are: legislature bicameral; lower chamber elected; upper chamber elected; percentage of indirectly elected legislators lower chamber; percentage of indirectly elected legislators upper chamber; head of state selection by legislature in practice; head of state appointment in practice; head of government selection by legislature in practice; head of government appointment in practice; head of state appoints cabinet in practice; head of government appoints cabinet in practice; head of state dismisses ministers in practice; head of government dismisses ministers in practice; head of state the same as head of government; chief executive appointment by upper chamber implicit approval; and chief executive appointment by upper chamber.

1.5. Indicators of Effective Parliament

No.	Indicator	Description/question	Data set
1.5.1	Legislature questions officials in practice (v2lqqstexp)	ES: In practice, does the legislature routinely question executive branch officials?	V-Dem
1.5.2.	Executive oversight (v2lgotovst)	ES: If executive branch officials were engaged in unconstitutional, illegal or unethical activity, how likely is it that a body other than the legislature, such as a comptroller general, general prosecutor or ombudsman, would question or investigate them and issue an unfavourable decision or report?	V-Dem
1.5.3	Legislature investigates in practice (v2lginvstp)	ES: If the executive were engaged in unconstitutional, illegal or unethical activity, how likely is it that a legislative body (perhaps a whole chamber, perhaps a committee, whether aligned with government or opposition) would conduct an investigation that would result in a decision or report that is unfavourable to the executive?	V-Dem
1.5.4	Legislature opposition parties (v2lgoppart)	ES: Are opposition parties (those not in the ruling party or coalition) able to exercise oversight and investigatory functions against the wishes of the governing party or coalition?	V-Dem
1.5.5	Executive constraints (xconst)	IC: The extent of institutionalized constraints on the decision-making powers of chief executives, whether individuals or collectivities.	Polity

Note: ES = expert surveys; IC = standards-based in-house coding.

1.6. Indicators of Local Democracy

No.	Indicator	Description/question	Data set
1.6.1	Local government index (v2xel_locelec)	CM: Are there elected local governments, and if so to what extent can they operate without interference from unelected bodies at the local level?	V-Dem
1.6.2	Subnational elections free and fair (v2elffelr)	ES: Taking all aspects of the pre-election period, election day and the post-election process into account, would you consider subnational elections (regional and local, as previously identified) to be free and fair on average?	V-Dem

Note: ES = expert surveys; CM = composite measures.

2. Rights (individual liberties and resources)

2.1. Indicators of Access to Justice

No.	Indicator	Description/question	Data set
2.1.1	Access to justice for men (v2clacjstm)	ES: Do men enjoy secure and effective access to justice?	V-Dem
2.1.2	Access to justice for women (v2clacjstw)	ES: Do women enjoy equal, secure and effective access to justice?	V-Dem
2.1.3	Judicial corruption decision (v2juccorrdc)	ES: How often do individuals or businesses make undocumented extra payments or bribes in order to speed up or delay the process or to obtain a favourable judicial decision?	V-Dem
2.1.4	Judicial accountability (v2juaccnt)	ES: When judges are found responsible for serious misconduct, how often are they removed from their posts or otherwise disciplined?	V-Dem
2.1.5	Fair trial (fairtrial)	IC: Extent to which citizens have the right to a fair trial in practice, that is, they are not subjected to arbitrary arrest, detention or exile; they have the right to recognition as a person before the law, the right to be under the jurisdiction of, and to seek redress from, competent, independent and impartial tribunals, and the right to be heard and to be entitled to trial without undue delays if arrested, detained or charged with a criminal offence.	CLD
2.1.6	Rule of Law (F2)	IC: Does due process prevail in civil and criminal matters?	Freedom in the World
2.1.7	Civil Rights (civ_rights)	IC: Ten-point scale corresponding to answer choices that range from 'Civil rights are systematically violated. There are no mechanisms and institutions to protect residents against violations of their rights' to 'Civil rights are codified by law and respected by all state institutions, which actively prevent discrimination. Residents are effectively protected by mechanisms and institutions established to prosecute, punish, and redress violations of their rights'.	BTI

Note: ES = expert surveys; IC = standards-based in-house coding.

2.2. Indicators of Civil Liberties

No.	Indicator	Description/question	Data set
Freedom of expression			
2.2.1	Freedom of discussion for women (v2cldiscw)	ES: Are women able to openly discuss political issues in private homes and in public spaces?	V-Dem
2.2.2	Freedom of discussion for men (v2cldiscm)	ES: Are men able to openly discuss political issues in private homes and in public spaces?	V-Dem
2.2.3	Freedom of academic and cultural expression (v2clacfree)	ES: Is there academic freedom and freedom of cultural expression related to political issues?	V-Dem
2.2.4	Freedom of opinion and expression (freexp)	IC: The extent to which individual citizens, groups and the media have freedom of opinion and expression, that is, the right of the citizens, groups and the press to hold views freely and to seek, obtain and pass on information on political issues broadly understood without being subject to actual limitations or restrictions.	CLD
2.2.5	Freedom of speech and press (speech)	IC: Government censorship and/or ownership of the media (including radio, TV, Internet, and/or domestic news agencies) is: Complete; Some; None	CIRIGHTS
2.2.6	Obstacles to access (A)	IC: Details infrastructural, economic, and political barriers to access; government decisions to shut off connectivity or block specific applications or technologies; legal, regulatory, and ownership control over internet service providers; and the independence of regulatory bodies.	Freedom on the Net
2.2.7	Limits on content (B)	IC: Analyzes legal regulations on content; technical filtering and blocking of websites; other forms of censorship and self-censorship; the vibrancy and diversity of online information space; and the use of digital tools for civic mobilization.	Freedom on the Net
2.2.8	Violations of user rights (C)	IC: Tackles legal protections and restrictions on free expression; surveillance and privacy; and legal and extralegal repercussions for online speech and activities, such as imprisonment, cyberattacks, or extralegal harassment and physical violence.	Freedom on the Net

No.	Indicator	Description/question	Data set
2.2.9	Freedom of Expression and Belief (D3)	IC: Is there academic freedom, and is the educational system free from extensive political indoctrination?	Freedom in the World
2.2.10	Freedom of Expression and Belief (D4)	IC: Are individuals free to express their personal views on political or other sensitive topics without fear of surveillance or retribution?	Freedom in the World
2.2.11	Freedom of expression (express)	IC: Ten-point scale corresponding to answer choices that range from 'Freedom of expression is denied. Independent media do not exist or are prohibited' to 'Freedom of expression is guaranteed against interference or government restrictions. Individuals, groups and the press can fully exercise these rights'.	BTI
Freedom of the press			
2.2.12	Print/broadcast censorship effort (v2mecenefm)	ES: Does the government directly or indirectly attempt to censor the print or broadcast media?	V-Dem
2.2.13	Harassment of journalists (v2meharjrn)	ES: Are individual journalists harassed, i.e. threatened with libel, arrested, imprisoned, beaten or killed, by governmental or powerful non-governmental actors while engaged in legitimate journalistic activities?	V-Dem
2.2.14	Media self-censorship (v2meslfcen)	ES: Is there self-censorship among journalists when reporting on issues that the government considers politically sensitive?	V-Dem
2.2.15	Print/broadcast media critical (v2mecrit)	ES: Of the major print and broadcast outlets, how many routinely criticize the government?	V-Dem
2.2.16	Print/broadcast media perspectives (v2merange)	ES: Do the major print and broadcast media represent a wide range of political perspectives?	V-Dem
2.2.17	Media bias (v2mebias)	ES: Is there media bias against opposition parties or candidates?	V-Dem
2.2.18	Media corrupt (v2mecorrpt)	ES: Do journalists, publishers or broadcasters accept payments in exchange for altering news coverage?	V-Dem
2.2.19	Media freedom	IC: Is criticism of government and government officials a common and normal part of the political dialogue in the mediated public sphere?	Media Freedom Data
2.2.20	Freedom of Expression and Belief (D1)	IC: Are there free and independent media?	Freedom in the World

No.	Indicator	Description/question	Data set
Freedom of association and assembly			
2.2.21	CSO entry and exit (v2cseeorgs)	ES: To what extent does the government achieve control over entry and exit by civil society organizations into public life?	V-Dem
2.2.22	CSO repression (v2csreprss)	ES: Does the government attempt to repress civil society organizations?	V-Dem
2.2.23	Freedom of peaceful assembly (v2caassemb)	ES: To what extent do state authorities respect and protect the right of peaceful assembly?	V-Dem
2.2.24	Freedom of association and assembly (freass)	IC: The extent to which individuals and groups have freedom of assembly and association, that is, the right of the citizens to gather freely and carry out peaceful demonstrations as well as to join, form and participate with other persons in political parties, cultural organizations, trade unions or the like of their choice without being subject to actual limitations or restrictions.	CLD
2.2.25	Freedom of assembly and association (assn)	IC: Citizens' rights to freedom of assembly and association are severely restricted or denied completely to all citizens; limited for all citizens or severely restricted or denied for select groups; virtually unrestricted and freely enjoyed by practically all citizens.	CIRIGHTS
2.2.26	Workers' rights practices (workerrights_practices_sum)	IC: Workers' rights (including association, collective bargaining, hours of work, fair compensation, forced labor, child labor, and occupational health) are severely restricted; somewhat restricted; fully protected.	CIRIGHTS
2.2.27	Associational and Organizational Rights (E1)	IC: Is there freedom of assembly?	Freedom in the World
2.2.28	Associational and Organizational Rights (E2)	IC: Is there freedom for nongovernmental organizations, particularly those that are engaged in human rights- and governance-related work?	Freedom in the World
2.2.29	Associational and Organizational Rights (E3)	IC: Is there freedom for trade unions and similar professional or labor organizations?	Freedom in the World

No.	Indicator	Description/question	Data set
2.2.30	Association/ assembly rights (assembly)	IC: Ten-point scale corresponding to answer choices that range from 'Association and assembly rights are denied. Independent civic groups do not exist or are prohibited' to 'Association and assembly rights are guaranteed against interference or government restrictions. Residents and civic groups can fully exercise these rights'.	BTI
Freedom of religion			
2.2.31	Freedom of religion (v2clrelig)	ES: Is there freedom of religion?	V-Dem
2.2.32	Religious organization repression (v2csrlgprep)	ES: Does the government attempt to repress religious organizations?	V-Dem
2.2.33	Freedom of thought, conscience and religion (frerel)	IC: The extent to which individuals and groups have freedom of thought, conscience and religion, that is, the right of citizens to have and change religion or belief of their own volition and alone or in community, manifest their religion or belief in practice, worship, observance and teaching in private or public, as well as proselytize peacefully without being subject to actual limitations or restrictions.	CLD
2.2.34	Freedom of religion (rel_free)	Government restrictions on religious practices are severe and widespread; moderate; practically absent.	CIRIGHTS
2.2.35	Freedom of Expression and Belief (D2)	IC: Are individuals free to practice and express their religious faith or nonbelief in public and private?	Freedom in the World
Freedom of movement			
2.2.41	Freedom of foreign movement (v2clfmovew)	ES: Is there freedom of foreign travel and emigration?	V-Dem
2.2.42	Freedom of domestic movement for women (v2cldmovew)	ES: Do women enjoy freedom of movement within the country?	V-Dem
2.2.43	Freedom of domestic movement for men (v2cldmovem)	ES: Do men enjoy freedom of movement within the country?	V-Dem
2.2.44	Freedom of movement and residence (fremov)	IC: The extent to which individuals and groups have freedom of movement and residence, that is, the right of citizens to settle and travel within their country as well as to leave and return to their country of without being subject to actual limitations or restrictions.	CLD

No.	Indicator	Description/question	Data set
2.2.45	Freedom of foreign movement (formov)	IC: Foreign movement and travel is severely restricted; somewhat restricted; unrestricted.	CIRIGHTS
2.2.46	Freedom of domestic movement (dommov)	IC: Domestic travel is severely restricted; somewhat restricted; unrestricted.	CIRIGHTS
2.2.47	Personal Autonomy and Individual Rights (G1)	IC: Do individuals enjoy freedom of movement, including the ability to change their place of residence, employment, or education?	Freedom in the World

Note: ES = expert surveys; IC = standards-based in-house coding.

2.3. Indicators of Basic Welfare

No.	Indicator	Description/question	Data set
2.3.1	Infant mortality rate	OD	CME
2.3.2	Life expectancy	OD	WPP
2.3.3	Kilocalories per person per day	OD	FAO
2.3.4	Literacy	OD	UNESCO
2.3.5	Mean years of schooling	OD	IHME
2.3.6	Educational equality (v2peedueq)	ES: To what extent is high quality basic education guaranteed to all, sufficient to enable them to exercise their basic rights as adult citizens?	V-Dem
2.3.7	Health equality (v2pehealth)	ES: To what extent is high quality basic health care guaranteed to all, sufficient to enable them to exercise their basic political rights as adult citizens?	V-Dem

Note: ES = expert surveys; IC = standards-based in-house coding; OD = observational data.

2.4. Indicators of Political Equality

No.	Indicator	Description/question	Data set
Social group equality			
2.4.1	Social class equality in respect for civil liberties (v2clacjust)	ES: Do poor people enjoy the same level of civil liberties as rich people?	V-Dem
2.4.2	Social group equality in respect for civil liberties (v2clsocgrp)	ES: Do all social groups, as distinguished by language, ethnicity, religion, race, region or caste, enjoy the same level of civil liberties, or are some groups generally in a more favourable position?	V-Dem

No.	Indicator	Description/question	Data set
2.4.3	Power distributed by socio-economic position (v2pepwrses)	ES: Is political power distributed according to socio-economic position?	V-Dem
2.4.4	Power distributed by social group (v2pepwrsoc)	ES: Is political power distributed according to social groups?	V-Dem
2.4.5	Power distributed by sexual orientation (v2pepwrt)	ES: Is political power distributed according to sexual orientation?	V-Dem
2.4.6	Exclusion by socio-economic Group (v2xpe_exlecon)	ES: Index of political exclusion by socio-economic group.	V-Dem
2.4.7	Exclusion by political group index (v2xpe_exlpol)	ES: Index of political exclusion by political group	V-Dem
2.4.8	Exclusion by social group index (v2xpe_exlsocgr)	ES: Index of political exclusion by social group	V-Dem
2.4.9	Exclusion by urban-rural location index (v2xpe_exlgeo)	ES: Index of political exclusion by urban-rural location	V-Dem
2.4.10	Political Pluralism and Participation (B4)	IC: Do various segments of the population (including ethnic, racial, religious, gender, LGBT+, and other relevant groups) have full political rights and electoral opportunities?	Freedom in the World
2.4.11	Rule of Law (F4)	IC: Do laws, policies, and practices guarantee equal treatment of various segments of the population?	Freedom in the World
2.4.12	Equal opportunity (equal)	IC: Ten-point scale corresponding to answer choices that range from 'Equality of opportunity is not achieved. Women and/or members of ethnic, religious and other groups have only very limited access to education, public office and employment. There are no legal provisions against discrimination' to 'Equality of opportunity is achieved. Women and members of ethnic, religious and other groups have equal access to education, public office and employment. There is a comprehensive and effective legal and institutional framework for the protection against discrimination'.	BTI
Gender equality			
2.4.13	Power distributed by gender (v2pepwrgen)	ES: Is political power distributed according to gender?	V-Dem

No.	Indicator	Description/question	Data set
2.4.14	CSO women's participation (v2csgender)	ES: Are women prevented from participating in civil society organizations?	V-Dem
2.4.15	Female vs. male mean years of schooling	OD	GHDx
2.4.16	Lower chamber female legislators (v2lgfemleg)	OD	V-Dem
2.4.17	Exclusion by gender index (v2xpe_exlgender)	ES: Index of political exclusion by gender	V-Dem
2.4.18	Women's political rights (wopol)	IC: How extensive are laws pertaining to women's political rights (right to vote, to run for political office, to hold elected and appointed government positions, to join political parties, to petition government officials); how effectively does the government enforce the laws?	CIRIGHTS
2.4.19	Women's economic rights (wecon)	IC: How extensive are laws pertaining to women's economic rights equal pay for equal work, free choice of profession, right to gainful employment, non-discrimination etc.); how effectively does the government enforce the laws?	CIRIGHTS
2.4.20	Political empowerment	CM: The Global Gender Gap Index examines the gap between men and women across four fundamental categories (subindexes): Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment.	Global Gender Gap Report
2.4.20	Political empowerment	CM: The Global Gender Gap Index examines the gap between men and women across four fundamental categories (subindexes): Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment.	Global Gender Gap Report

Note: ES = expert surveys; IC = standards-based in-house coding; OD = observational data; CM = composite measures.

3. Rule of Law (effective control of executive power)

3.1. Indicators of Judicial Independence

No.	Indicator	Description/question	Data set
3.1.1	High Court independence (v2juhcind)	ES: When the High Court in the judicial system is ruling in cases that are salient to the government, how often would you say that it makes decisions that merely reflect government wishes regardless of its sincere view of the legal record?	V-Dem
3.1.2	Lower court independence (v2juncind)	ES: When judges not on the High Court are ruling in cases that are salient to the government, how often would you say that their decisions merely reflect government wishes regardless of their sincere view of the legal record?	V-Dem
3.1.3	Compliance with High Court (v2juhccomp)	ES: How often would you say the government complies with important decisions of the High Court with which it disagrees?	V-Dem
3.1.4	Compliance with judiciary (v2jucomp)	ES: How often would you say the government complies with important decisions by other courts with which it disagrees?	V-Dem
3.1.5	Independent Judiciary (injud)	IC: The extent to which the judiciary is not independent; partially independent; generally independent of control from other sources, such as another branch of the government or the military.	CIRIGHTS
3.1.6	Rule of Law (F1)	IC: Is there an independent judiciary?	Freedom in the World
3.1.7	Separation of power (separation)	IC: Ten-point scale corresponding to answer choices that range from 'There is no separation of powers, neither de jure nor de facto' to 'There is a clear separation of powers with mutual checks and balances'.	BTI
3.1.8	Independent judiciary (judiciary)	IC: Ten-point scale corresponding to answer choices that range from 'The judiciary is not independent and not institutionally differentiated' to 'The judiciary is independent and free both from unconstitutional intervention by other institutions and from corruption. It is institutionally differentiated, and there are mechanisms for judicial review of legislative or executive acts'.	BTI

Note: ES = expert surveys; IC = standards-based in-house coding; OD = observational data; CM = composite measures.

3.2. Indicators of Absence of Corruption

No.	Indicator	Description/question	Data set
3.2.1	Public sector corrupt exchanges (v2excrtps)	ES: How routinely do public sector employees grant favours in exchange for bribes, kickbacks or other material inducements?	V-Dem
3.2.2	Public sector theft (v2exthftps)	ES: How often do public sector employees steal, embezzle or misappropriate public funds or other state resources for personal or family use?	V-Dem
3.2.3	Executive embezzlement and theft (v2exembez)	ES: How often do members of the executive (the head of state, the head of government and cabinet ministers) or their agents steal, embezzle or misappropriate public funds or other state resources for personal or family use?	V-Dem
3.2.4	Executive bribery and corrupt exchanges (v2exbribe)	ES: How routinely do members of the executive (the head of state, the head of government and cabinet ministers) or their agents grant favours in exchange for bribes, kickbacks or other material inducements?	V-Dem
3.2.5	Corruption (F)	ES: How widespread is actual or potential corruption in the form of excessive patronage, nepotism, job reservations, 'favour-for-favours', secret party funding or suspiciously close ties between politics and business?	ICRG
3.2.6	Functioning of Government (C2)	IC: Are safeguards against official corruption strong and effective?	Freedom in the World
3.2.7	Prosecution of office abuse (prosecution)	IC: Ten-point scale corresponding to answer choices that range from 'Officeholders who break the law and engage in corruption can do so without fear of legal consequences or adverse publicity' to 'Officeholders who break the law and engage in corruption are prosecuted rigorously under established laws and always attract adverse publicity'.	BTI

Note: ES = expert surveys; IC = standards-based in-house coding.

3.3. Indicators of Predictable Enforcement

No.	Indicator	Description/question	Data set
3.3.1	Executive respects constitution (v2exrescon)	ES: Do members of the executive (the head of state, the head of government and cabinet ministers) respect the constitution?	V-Dem
3.3.2	Transparent laws with predictable enforcement (v2cltrnslw)	ES: Are the laws of the land clear, well-publicized, coherent (consistent with each other), relatively stable from year to year and enforced in a predictable manner?	V-Dem
3.3.3	Rigorous and impartial public administration (v2clrspct)	ES: Are public officials rigorous and impartial in the performance of their duties?	V-Dem
3.3.4	Criteria for appointment decisions in the state administration (v2stcritcadm)	To what extent are appointment decisions in the state administration based on personal and political connections, as opposed to skills and merit?	V-Dem
3.3.5	Criteria for appointment decisions in the armed forces (v2stcritapparm)	To what extent are appointment decisions in the armed forces based on personal or political connections or alternatively based on skills and merit?	V-Dem
3.3.6	Bureaucratic quality (L)	ES: Bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services.	ICRG
3.3.7	Law and order (I)	ES: To what extent is the legal system strong and impartial and to what degree is there popular observance of the law?	ICRG
3.3.8	Functioning of Government (C3)	IC: Does government operate with openness and transparency?	Freedom in the World
3.3.9	Monopoly on the use of force (monopoly)	IC: Ten-point scale corresponding to answer choices that range from 'There is no state monopoly on the use of force' to 'There is no competition with the state's monopoly on the use of force throughout the entire territory'.	BTI
3.3.10	Basic administration (admin)	IC: Ten-point scale corresponding to answer choices that range from 'The administrative structures of the state are limited to keeping the peace and maintaining law and order. Their territorial scope is very limited, and broad segments of the population are not covered' to 'The state has a differentiated administrative structure throughout the country which provides all basic public services'.	BTI

Note: ES = expert surveys; IC = standards-based in-house coding.

3.4. Indicators of Personal Integrity and Security

No.	Indicator	Description/question	Data set
3.4.1	Freedom from torture (v2cltort)	ES: Is there freedom from torture?	V-Dem
3.4.2	Freedom from political killings (v2ckill)	ES: Is there freedom from political killings?	V-Dem
3.4.3	Political terror scale (PTSsd)	IC: What is the level of political violence and terror?	Gibney et al.
3.4.4	Internal conflict (D)	ES: Is there political violence in the country? The rating assigned is the sum of three subcomponents: civil war/coup threat, terrorism/political violence and civil disorder	ICRG
3.4.5	Physical integrity rights index (physint)	IC: Additive Index ranging from 0 (no government respect for the prohibition of torture, extrajudicial killing, political imprisonment and disappearance) to 8 (full government respect for these four rights).	CIRIGHTS
3.4.6	Personal Autonomy and Individual Rights (G4)	IC: Do individuals enjoy equality of opportunity and freedom from economic exploitation?	Freedom in the World
3.4.7	Rule of Law (F3)	IC: Is there protection from the illegitimate use of physical force and freedom from war and insurgencies?	Freedom in the World

Note: ES = expert surveys; IC = standards-based in-house coding.

4. Participation (instruments for and realization of political involvement)

4.1. Indicators of Civil Society

No.	Indicator	Description/question	Data set
4.1.1	CSO participatory environment (v2csprtcpt)	ES: Are people involved in civil society organizations?	V-Dem
4.1.2	Engaged society (v2dlengage)	ES: When important policy changes are being considered, how wide and how independent are public deliberations?	V-Dem
4.1.3	CSO consultation (v2csnsult)	ES: Are major civil society organizations (CSOs) routinely consulted by policymakers on policies relevant to their members?	V-Dem
4.1.4	E-Participation index	CM: EPI is a multifaceted framework, composed of three core components, i.e., e-information, e-consultation and e-decision-making	United Nations E-Government Survey
4.1.5	Interest groups (int_group)	IC: Ten-point scale corresponding to answer choices that range from 'Interest groups are present only in isolated social segments, are on the whole poorly balanced and cooperate little. A large number of social interests remain unrepresented' to 'There is a broad range of interest groups that reflect competing social interests, tend to balance one another and are cooperative'	BTI
4.1.6	Social capital (soc_cap)	IC: Ten-point scale corresponding to answer choices that range from 'There is a very low level of trust among the population, and civic self-organization is rudimentary' to 'There is a very high level of trust among the population and a large number of autonomous, self-organized groups, associations and organizations'	BTI

Note: ES = expert surveys; CM = composite measure; IC = standards-based in-house coding.

4.2 Indicators of Civic Engagement

No.	Indicator	Description/question	Data set
4.2.1	Engagement in independent non-political associations (v2canonpol)	ES: What share of the population is regularly active in independent non-political associations, such as sports clubs, literary societies, charities, fraternal groups, or support groups?	V-Dem
4.2.2	Engagement in independent political associations (v2capolit)	ES: What share of the population is regularly active in independent political interest associations, such as environmental associations, animal rights groups, or LGBT rights groups?	V-Dem

No.	Indicator	Description/question	Data set
4.2.3	Engagement in independent trade unions (v2catrauni)	ES: What share of the population is regularly active in independent trade unions?	V-Dem
4.2.4	Civil society traditions (civil_trad)	IC: Ten-point scale corresponding to answer choices that range from 'Traditions of civil society are very strong' to 'Traditions of civil society are very weak'.	BTI

Note: IC = standards-based in-house coding; ES = expert surveys.

4.3. Indicators of Electoral Participation

No.	Indicator	Description/question	Data set
4.3.1	Election VAP turnout (v2elvaptrn)	OD	International IDEA

Note: OD = observational data.

Additional index

0.0 Indicators of Direct Democracy

No.	Indicator	Description/question	Data set
	Direct popular vote index (v2xdd_dd)	CM: Measure based on 12 observable variables from V-Dem, resulting from the combination of scores for each type of popular vote (i.e. popular initiatives, referendums, plebiscites and obligatory referendums). The measure captures how easy it is to initiate and approve each type of popular vote and how consequential that vote is (if approved). Ease of initiation is measured by the existence of a direct democratic process, the number of signatures needed and the time limit to collect signatures. Ease of approval is measured by quorums pertaining to participation, approval, supermajority and district majority. Consequences are measured by the legal status of the decision made by citizens (binding or consultative) and the frequency with which direct popular votes have been used and approved in the past.	V-Dem

Note: CM = composite measures.

Summary of Indicators

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
1.1.1	EMB autonomy	V-Dem	v2elembaut	0	0,00%	1975	2022
1.1.2	EMB capacity	V-Dem	v2elembcap	0	0,00%	1975	2022
1.1.3	Election: other voting irregularities	V-Dem	v2elirreg	112	1,43%	1975	2022
1.1.4	Election government intimidation	V-Dem	v2elintim	112	1,43%	1975	2022
1.1.5	Election free and fair	V-Dem	v2elfrfair	112	1,43%	1975	2022
1.1.6	Competition	LIED	competitive elections	1	0,01%	1975	2022
1.1.7	A3 Electoral process	Freedom in the World	A3	5107	65,22%	2012	2022
1.1.8	B2 Political Pluralism and Participation	Freedom in the World	B2	5107	65,22%	2012	2022
1.1.9	B3 Political Pluralism and Participation	Freedom in the World	B3	5107	65,22%	2012	2022
1.1.10	Free and Fair Elections	BTI	elect	4877	62,29%	1975	2022
1.2.1	Suffrage	V-Dem	v2elsuffrage	0	0,00%	1975	2022
1.2.2	Election voter registry	V-Dem	V2elrgstry	112	1,43%	1975	2022
1.3.1	Party ban	V-Dem	v2psparban	0	0,00%	1975	2022
1.3.2	Barriers to parties	V-Dem	v2psbars	0	0,00%	1975	2022
1.3.3	Opposition parties' autonomy	V-Dem	v2psoppaut	195	2,49%	1975	2022

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
1.3.4	Elections multiparty	V-Dem	v2elmulpar	112	1,43%	1975	2022
1.3.5	Competitiveness of participation	Polity	parcomp	577	7,37%	1975	2022
1.3.6	Multiparty elections	LIED	multiparty legislative elections	1	0,01%	1975	2022
1.3.7	B1 Political Pluralism and Participation	Freedom in the World	B1	5927	75,70%	2012	2022
1.3.8	Party System	BTI	party_sys	5661	72,30%	2006	2022
1.4.1	Elected officials index	V-Dem	v2x_elecoff	0	0,00%	1975	2022
1.4.2	Competitiveness of executive recruitment	Polity	xrcomp	409	5,22%	1975	2022
1.4.3	Openness of executive recruitment	Polity	xropen	409	5,22%	1975	2022
1.4.4	Electoral	BRRD	Electoral	1	0,01%	1975	2022
1.4.5	A1 Electoral Process	Freedom in the World	A1	5107	65,22%	2012	2022
1.4.6	A2 Electoral Process	Freedom in the World	A2	5107	65,22%	2012	2022
1.4.7	C1 Functioning of Government	Freedom in the World	C1	5107	65,22%	2012	2022
1.4.9	Lexical index of electoral democracy	LIED	lexical_index_plus	2	0,03%	1975	2022
1.5.1	Legislature questions officials in practice	V-Dem	v2lgqstexp	89	1,14%	1975	2022
1.5.2	Executive oversight	V-Dem	v2lgotovst	29	0,37%	1975	2022
1.5.3	Legislature investigates in practice	V-Dem	v2lginvstp	39	0,50%	1975	2022
1.5.4	Legislature opposition parties	V-Dem	v2lgoppart	87	1,11%	1975	2022
1.5.5	Executive constraints	Polity	xconst	409	5,22%	1975	2022
1.6.1	Local government index	V-Dem	v2xel_locelec	167	2,13%	1975	2022
1.6.2	Subnational elections free and fair	V-Dem	v2elffelr	574	7,33%	1975	2022
2.1.1	Access to justice for men	V-Dem	v2clacjstm	0	0,00%	1975	2022
2.1.2	Access to justice for women	V-Dem	v2clacjstw	0	0,00%	1975	2022
2.1.3	Judicial corruption decision	V-Dem	v2jucorrdc	30	0,38%	1975	2022
2.1.4	Judicial accountability	V-Dem	v2juacct	0	0,00%	1975	2022
2.1.5	Fair trial	CLD	fairtrial	38	0,49%	1975	2022
2.1.6	F2 Rule of Law	Freedom in the World	F2	5927	75,70%	2012	2022
2.1.7	Civil Rights	BTI	civ_rights	5661	72,30%	2006	2022
2.2.1	Freedom of discussion for women	V-Dem	v2cldiscw	0	0,00%	1975	2022
2.2.2	Freedom of discussion for men	V-Dem	v2cldiscm	0	0,00%	1975	2022

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
2.2.3	Freedom of academic and cultural expression	V-Dem	v2clacfree	0	0,00%	1975	2022
2.2.4	Freedom of opinion and expression	CLD	freexp	38	0,49%	1975	2022
2.2.5	Freedom of speech and press	CIRIGHTS	speech	1281	16,36%	1981	2022
2.2.6	A Obstacles to access	Freedom on the Net	A	7091	90,56%	2011	2022
2.2.7	B Limits on content	Freedom on the Net	B	7091	90,56%	2011	2022
2.2.8	C Violations of user rights	Freedom on the Net	C	7091	90,56%	2011	2022
2.2.9	D3 Freedom of Expression and Belief	Freedom in the World	D3	5927	75,70%	2012	2022
2.2.10	D4 Freedom of Expression and Belief	Freedom in the World	D4	5927	75,70%	2012	2022
2.2.11	Freedom of expression	BTI	express	5661	72,30%	2006	2022
2.2.12	Print/broadcast censorship effort	V-Dem	v2mecenefm	0	0,00%	1975	2022
2.2.13	Harassment of journalists	V-Dem	v2meharjrn	0	0,00%	1975	2022
2.2.14	Media self-censorship	V-Dem	v2meslfcen	0	0,00%	1975	2022
2.2.15	Print/broadcast media critical	V-Dem	v2mecrit	0	0,00%	1975	2022
2.2.16	Print/broadcast media perspectives	V-Dem	v2merange	0	0,00%	1975	2022
2.2.17	Media bias	V-Dem	v2mebias	0	0,00%	1975	2022
2.2.18	Media corrupt	V-Dem	v2mecorrpt	0	0,00%	1975	2022
2.2.19	Media freedom	Media Freedom Data	MFD	377	4,81%	1975	2022
2.2.20	D1 Freedom of Expression and Belief	Freedom in the World	D1	5927	75,70%	2012	2022
2.2.21	CSO entry and exit	V-Dem	v2cseeorgs	0	0,00%	1975	2022
2.2.22	CSO repression	V-Dem	v2csreprss	0	0,00%	1975	2022
2.2.23	Freedom of peaceful assembly	V-Dem	v2caassemb	27	0,34%	1975	2022
2.2.24	Freedom of association and assembly	CLD	freass	38	0,49%	1975	2022
2.2.25	Freedom of assembly and association	CIRIGHTS	assn	1292	16,50%	1981	2022
2.2.26	Workers' rights practices	CIRIGHTS	workerrights_practices_sum	3304	42,20%	1994	2022
2.2.27	E1 Associational and Organizational Rights	Freedom in the World	E1	5927	75,70%	2012	2022
2.2.28	E2 Associational and Organizational Rights	Freedom in the World	E2	5927	75,70%	2012	2022
2.2.29	E3 Associational and Organizational Rights	Freedom in the World	E3	5927	75,70%	2012	2022
2.2.30	Association/assembly rights	BTI	assembly	5661	72,30%	2006	2022

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
2.2.31	Freedom of religion	V-Dem	v2clrelig	0	0,00%	1975	2022
2.2.32	Religious organization repression	V-Dem	v2csrlgrep	0	0,00%	1975	2022
2.2.33	Freedom of thought, conscience and religion	CLD	frerel	38	0,49%	1975	2022
2.2.34	Freedom of religion	CIRIGHTS	reL_free	1062	13,56%	1981	2022
2.2.35	D2 Freedom of Expression and Belief	Freedom in the World	D2	5927	75,70%	2012	2022
2.2.41	Freedom of foreign movement	V-Dem	v2clfmov	0	0,00%	1975	2022
2.2.42	Freedom of domestic movement for women	V-Dem	v2cldmovew	0	0,00%	1975	2022
2.2.43	Freedom of domestic movement for men	V-Dem	v2cldmovem	0	0,00%	1975	2022
2.2.44	Freedom of movement and residence	CLD	fremov	38	0,49%	1975	2022
2.2.45	Freedom of foreign movement	CIRIGHTS	formov	1060	13,54%	1981	2022
2.2.46	Freedom of domestic movement	CIRIGHTS	dommov	1062	13,56%	1981	2022
2.2.47	G1 Personal Autonomy and Individual Rights	Freedom in the World	G1	5927	75,70%	2012	2022
2.3.1	Infant mortality rate	CME	---	137	1,75%	1975	2022
2.3.2	Life expectancy	WPP	---	82	1,05%	1975	2022
2.3.3	Kilocalories per person per day	FAO	---	694	8,86%	1975	2022
2.3.4	Literacy	UNESCO	---	2833	36,18%	1975	2022
2.3.5	Mean years of schooling	IHME	---	31	0,40%	1975	2022
2.3.6	Educational equality	V-Dem	v2peedueq	0	0,00%	1975	2022
2.3.7	Health equality	V-Dem	v2pehealth	0	0,00%	1975	2022
2.4.1	Social class equality in respect for civil liberties	V-Dem	v2clacjust	0	0,00%	1975	2022
2.4.2	Social group equality in respect for civil liberties	V-Dem	v2clsocgrp	0	0,00%	1975	2022
2.4.3	Power distributed by socio-economic position	V-Dem	v2pepwrse	0	0,00%	1975	2022
2.4.4	Power distributed by social group	V-Dem	v2pepwrsoc	0	0,00%	1975	2022
2.4.5	Power distributed by sexual orientation	V-Dem	v2pepwrort	0	0,00%	1975	2022
2.4.6	Exclusion by socio-economic group index	V-Dem	v2xpe_exlecon	19	0,24%	1975	2022
2.4.7	Exclusion by political group index	V-Dem	v2xpe_exlpol	39	0,50%	1975	2022
2.4.8	Exclusion by social group index	V-Dem	v2xpe_exlsocgr	34	0,43%	1975	2022
2.4.9	Exclusion by urban-rural location index	V-Dem	v2xpe_exlgeo	34	0,43%	1975	2022
2.4.10	B4 Political Pluralism and Participation	Freedom in the World	B4	5927	75,70%	2012	2022

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
2.4.11	F4 Rule of Law	Freedom in the World	F4	5927	75,70%	2012	2022
2.4.12	Equal opportunity	BTI	equal	5661	72,30%	2006	2022
2.4.13	Power distributed by gender	V-Dem	v2pepwrngen	0	0,00%	1975	2022
2.4.14	CSO women's participation	V-Dem	v2csgender	0	0,00%	1975	2022
2.4.15	Female vs. male mean years of schooling	GHDx	—	31	0,40%	1975	2022
2.4.16	Lower chamber female legislators	V-Dem	v2lgfemleg	660	8,43%	1975	2022
2.4.17	Exclusion by gender	V-Dem	v2xpe_exlgender	19	0,24%	1975	2022
2.4.18	Women's political rights	CIRIGHTS	wopol	1468	18,75%	1981	2022
2.4.19	Women's economic rights	CIRIGHTS	wecon	1519	19,40%	1981	2022
2.4.20	Political empowerment	Global Gender Gap Report	—	5904	75,40%	2006	2022
3.1.1	High Court independence	V-Dem	v2juhcind	27	0,34%	1975	2022
3.1.2	Lower court independence	V-Dem	v2juncind	0	0,00%	1975	2022
3.1.3	Compliance with High Court	V-Dem	v2juhccomp	30	0,38%	1975	2022
3.1.4	Compliance with judiciary	V-Dem	v2jucomp	30	0,38%	1975	2022
3.1.5	Independent judiciary	CIRIGHTS	injud	1086	13,87%	1981	2022
3.1.6	F1 Rule of Law	Freedom in the World	F1	5927	75,70%	2012	2022
3.1.7	Separation of power	BTI	separation	5661	72,30%	2006	2022
3.1.8	Independent judiciary	BTI	judiciary	5661	72,30%	2006	2022
3.2.1	Public sector corrupt exchanges	V-Dem	v2excrtps	0	0,00%	1975	2022
3.2.2	Public sector theft	V-Dem	v2exthftps	0	0,00%	1975	2022
3.2.3	Executive embezzlement and theft	V-Dem	v2exembez	0	0,00%	1975	2022
3.2.4	Executive bribery and corrupt exchanges	V-Dem	v2exbribe	0	0,00%	1975	2022
3.2.5	Corruption	ICRG	F	2688	34,33%	1984	2022
3.2.6	C2 Functioning of Government	Freedom in the World	C2	5927	75,70%	2012	2022
3.2.7	Prosecution of office abuse	BTI	prosecution	5661	72,30%	2006	2022
3.3.1	Executive respects constitution	V-Dem	v2exrescon	0	0,00%	1975	2022
3.3.2	Transparent laws with predictable enforcement	V-Dem	v2cltrnslw	0	0,00%	1975	2022
3.3.3	Rigorous and impartial public administration	V-Dem	v2clrspct	0	0,00%	1975	2022
3.3.4	Criteria for appointment decisions in the state administration	V-Dem	v2stcritrecadm	270	3,45%	1975	2022

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
3.3.5	Criteria for appointment decisions in the armed forces	V-Dem	v2stcritapparm	286	3,65%	1975	2022
3.3.6	Bureaucratic quality	ICRG	L	2688	34,33%	1984	2022
3.3.7	Law and order	ICRG	I	2688	34,33%	1984	2022
3.3.8	C3 Functioning of Government	Freedom in the World	C3	5927	75,70%	2012	2022
3.3.9	Monopoly on the use of force	BTI	monopoly	5661	72,30%	2006	2022
3.3.10	Basic administration	BTI	admin	5661	72,30%	2006	2022
3.4.1	Freedom from torture	V-Dem	v2cltort	0	0,00%	1975	2022
3.4.2	Freedom from political killings	V-Dem	v2clkill	0	0,00%	1975	2022
3.4.3	Political terror scale	Gibney et al.	PTSsd	298	3,81%	1976	2022
3.4.4	Internal conflict	ICRG	D	2688	34,33%	1984	2022
3.4.5	Physical integrity rights index	CIRIGHTS	physint	1305	16,67%	1981	2022
3.4.6	G4 Personal Autonomy and Individual Rights	Freedom in the World	G4	5927	75,70%	2012	2022
3.4.7	F3 Rule of Law	Freedom in the World	F3	5927	75,70%	2012	2022
4.1.1	CSO participatory environment	V-Dem	v2csprtcpt	0	0,00%	1975	2022
4.1.2	Engaged society	V-Dem	v2dlengage	0	0,00%	1975	2022
4.1.3	CSO consultation	V-Dem	V2csnsult	0	0,00%	1975	2022
4.1.4	E-Participation index	UN E-Government Survey	–	4441	56,72%	2003	2022
4.1.5	Interest groups	BTI	int_group	5661	72,30%	2006	2022
4.1.6	Social capital	BTI	soc_cap	5661	72,30%	2006	2022
4.2.1	Engagement in independent non-political associations	V-Dem	v2canonpol	52	0,66%	1975	2022
4.2.2	Engagement in independent political associations	V-Dem	v2capolit	64	0,82%	1975	2022
4.2.3	Engagement in independent trade unions	V-Dem	v2catrauni	67	0,86%	1975	2022
4.2.4	Civil society traditions	BTI	civil_trad	5661	72,30%	2006	2022
4.3.1	Election: VAP turnout	International IDEA	VAP turnout	875	11,17%	1975	2022
0.0.0	Direct popular vote index	V-Dem	v2xdd_dd	0	0,00%	1975	2022

Annex E. Dimensionality tests, factor loadings and Cronbach's alpha values

DIMENSIONALITY TESTS

The empirical dimensionality of the indicators selected to capture latent theoretical concepts at all aggregation levels were assessed using Bayesian factor analysis models. For each model, the first 5,000 iterations of the chain were discarded and the next 100,000 iterations selected. Saving each 100th iteration of the chain produced a data set of 1000 estimates for the parameters of interest in the models. As a general strategy, Bayesian factor analysis models were estimated by asking for a single factor. Two- and in some cases three-factor models were also run but none of these showed a better general fit with regard to capturing the empirical dimensionality in the data than the unidimensional solutions. Moreover, Cronbach's Alpha (CA) was calculated as a measure of scalability. To inform the choices made, the pairwise bivariate correlation coefficients (Pearson's r) were also calculated for each cluster of indicators. These are presented in Annex F. The tables in this Annex include, for each indicator, the loadings and their corresponding standard error, the uniqueness coefficients and their corresponding standard errors, and the Cronbach's Alpha coefficients computed for the scale with the item deleted.

FACTOR LOADINGS AND CRONBACH'S ALPHA VALUES

Attribute 1: Representation

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
1.1	Credible Elections	0.974	0.051	0.930
1.3	Free Political Parties	0.888	0.212	0.944
1.4	Elected Government	0.965	0.068	0.930
1.5	Effective Parliament	0.938	0.120	0.936
1.6	Local Democracy	0.799	0.363	0.960
				Cronbach's alpha = 0.952

1.1. Credible Elections

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
1.1.1	EMB autonomy	0.963	0.073	0.930
1.1.2	EMB capacity	0.896	0.197	0.935
1.1.3	Election other voting irregularities	0.931	0.133	0.934
1.1.4	Election government intimidation	0.972	0.055	0.93
1.1.5	Election free and fair	0.982	0.035	0.929
1.1.6	Competition	0.980	0.040	0.952
1.1.7	A3 Electoral process	0.981	0.038	0.942
1.1.8	B2 Political Pluralism and Participation	0.988	0.024	0.942
1.1.9	B3 Political Pluralism and Participation	0.967	0.064	0.943
1.1.10	Free and fair elections	0.966	0.066	0.934
				Cronbach's alpha = 0.944

1.3. Free Political Parties

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
1.3.1	Party ban	0.973	0.947	0.909
1.3.2	Barriers to parties	0.971	0.943	0.905
1.3.3	Opposition parties' autonomy	0.962	0.926	0.907
1.3.4	Elections multiparty	0.932	0.869	0.908
1.3.5	Competitiveness of participation	0.902	0.813	0.909
1.3.6	Multiparty elections	0.94	0.883	0.93
1.3.7	B1 Political Pluralism and Participation	0.981	0.962	0.917
1.3.8	Party System	0.927	0.859	0.934
				Cronbach's alpha = 0.925

1.4. Elected Government

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
1.4.1	Elected officials index	0.796	0.366	0.946
1.4.2	Competitiveness of executive recruitment	0.953	0.091	0.943
1.4.3	Openness of executive recruitment	0.876	0.233	0.945
1.4.4	Electoral	0.978	0.043	0.923
1.4.5	A1 Electoral Process	0.994	0.011	0.912
1.4.6	A2 Electoral Process	0.992	0.015	0.911
1.4.7	C1 Functioning of Government	0.992	0.016	0.913
1.4.9	Lexical index of electoral democracy	0.989	0.023	0.939
				Cronbach's alpha = 0.946

1.5. Effective Parliament

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
1.5.1	Legislature questions officials in practice	0.940	0.116	0.935
1.5.2	Executive oversight	0.959	0.080	0.931
1.5.3	Legislature investigates in practice	0.974	0.051	0.926
1.5.4	Legislature: opposition parties	0.965	0.069	0.929
1.5.5	Executive constraints	0.944	0.110	0.966
				Cronbach's alpha = 0.951

Attribute 2: Rights

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.1	Access to Justice	0.940	0.116	0.859
2.2	Civil Liberties	0.871	0.241	0.892
2.3	Basic Welfare	0.727	0.471	0.920
2.4	Political Equality	0.874	0.236	0.869
				Cronbach's alpha = 0.912

2.1. Access to Justice

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.1.1	Access to justice for men	0.983	0.033	0.818
2.1.2	Access to justice for women	0.980	0.04	0.819
2.1.3	Judicial corruption decision	0.725	0.474	0.844
2.1.4	Judicial accountability	0.681	0.536	0.857
2.1.5	Fair trial	0.923	0.147	0.876
2.1.6	F2 Rule of Law	0.908	0.176	0.871
2.1.7	Civil Rights	0.901	0.189	0.867
				Cronbach's alpha = 0.872

2.2. Civil Liberties

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.A	Freedom of expression	0.958	0.082	0.950
2.2.B	Freedom of the press	0.951	0.094	0.953
2.2.C	Freedom of association and assembly	0.981	0.038	0.947
2.2.D	Freedom of religion	0.822	0.325	0.970
2.2.E	Freedom of movement	0.893	0.203	0.957
				Cronbach's alpha = 0.964

2.2.A. Freedom of expression

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.1	Freedom of discussion for women	0.972	0.054	0.912
2.2.2	Freedom of discussion for men	0.978	0.043	0.913
2.2.3	Freedom of academic and cultural expression	0.930	0.136	0.912
2.2.4	Freedom of opinion and expression	0.888	0.211	0.930
2.2.5	Freedom of speech and press	0.750	0.437	0.933
2.2.6	A obstacles to access	0.855	0.268	0.919

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.7	B limits on content	0.920	0.154	0.913
2.2.8	C violations of user rights	0.910	0.171	0.914
2.2.9	D3 Freedom of Expression and Belief	0.943	0.110	0.928
2.2.10	D4 Freedom of Expression and Belief	0.927	0.141	0.928
2.2.11	Freedom of expression	0.916	0.161	0.924
				Cronbach's alpha = 0.928

2.2.B. Freedom of the press

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.12	Print/ broadcast censorship effort	0.950	0.097	0.944
2.2.13	Harassment of journalists	0.940	0.116	0.945
2.2.14	Media self-censorship	0.937	0.123	0.946
2.2.15	Critical print/broadcast media	0.955	0.087	0.945
2.2.16	Print/broadcast media perspectives	0.934	0.128	0.946
2.2.17	Media bias	0.942	0.112	0.945
2.2.18	Media corrupt	0.913	0.166	0.948
2.2.19	Media freedom INVERTED	0.920	0.154	0.966
2.2.20	D1 Freedom of Expression and Belief	0.951	0.096	0.963
				Cronbach's alpha = 0.956

2.2.C. Freedom of association and assembly

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.21	CSO entry and exit	0.925	0.144	0.879
2.2.22	CSO repression	0.936	0.123	0.875
2.2.23	Freedom of peaceful assembly	0.927	0.141	0.875
2.2.24	Freedom of association and assembly	0.929	0.137	0.898
2.2.25	Freedom of assembly and association	0.852	0.275	0.902
2.2.26	Workers' rights	0.672	0.548	0.895
2.2.27	E1 Associational and Organizational Rights	0.968	0.064	0.893
2.2.28	E2 Associational and Organizational Rights	0.976	0.048	0.893
2.2.29	E3 Associational and Organizational Rights	0.917	0.159	0.897
2.2.30	Association/ assembly rights	0.948	0.102	0.887
				Cronbach's alpha = 0.901

2.2.D. Freedom of religion

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.31	Freedom of religion	0.925	0.144	0.877
2.2.32	Religious organization repression	0.889	0.210	0.890
2.2.33	Freedom of thought, conscience, and religion	0.914	0.165	0.883
2.2.34	Freedom of religion	0.837	0.299	0.905
2.2.35	D2 Freedom of Expression and Belief	0.938	0.121	0.883
				Cronbach's alpha = 0.909

2.2.E. Freedom of movement

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.2.41	Freedom of foreign movement	0.932	0.131	0.874
2.2.42	Freedom of domestic movement for women	0.887	0.214	0.878
2.2.43	Freedom of domestic movement for men	0.947	0.103	0.884
2.2.44	Freedom of movement and residence	0.884	0.219	0.875
2.2.45	Freedom of foreign movement	0.807	0.349	0.891
2.2.46	Freedom of domestic movement	0.756	0.428	0.895
2.2.47	G1 Personal Autonomy and Individual Rights	0.943	0.112	0.884
				Cronbach's alpha = 0.898

2.3. Basic welfare

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.3.1	Infant mortality rate	0.991	0.018	0.932
2.3.2	Life expectancy	0.964	0.070	0.935
2.3.3	Kilocalories per person per day	0.806	0.351	0.944
2.3.4	Literacy	0.846	0.284	0.950
2.3.5	Mean years of schooling	0.881	0.224	0.936
2.3.6	Educational equality	0.731	0.465	0.944
2.3.7	Health equality	0.779	0.393	0.941
				Cronbach's alpha = 0.948

2.4. Political Equality

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.4.A	Social group equality	0.895	0.196	0.898
2.4.B	Gender equality	0.941	0.111	0.786
				Cronbach's alpha = 0.912

2.4.A. Social group equality

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.4.1	Social class equality in respect for civil liberties	0.874	0.237	0.929
2.4.2	Social group equality in respect for civil liberties	0.801	0.359	0.932
2.4.3	Power distributed by socioeconomic position	0.680	0.537	0.936
2.4.4	Power distributed by social group	0.799	0.362	0.932
2.4.5	Power distributed by sexual orientation	0.709	0.498	0.935
2.4.6	Exclusion by socio-economic group index	0.942	0.113	0.927
2.4.7	Exclusion by political group index	0.890	0.208	0.930
2.4.8	Exclusion by social group index	0.971	0.057	0.925
2.4.9	Exclusion by urban-rural location index	0.902	0.186	0.930
2.4.10	B4 Political Pluralism and Participation	0.829	0.313	0.941
2.4.11	F4 Rule of Law	0.889	0.210	0.941
2.4.12	Equal opportunity	0.848	0.282	0.940
				Cronbach's alpha = 0.939

2.4.B. Gender equality

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
2.4.13	Power distributed by gender	0.877	0.232	0.791
2.4.14	CSO women's participation	0.824	0.322	0.800
2.4.15	Female vs. male mean years of schooling	0.646	0.583	0.824
2.4.16	Women's representation in national parliaments	0.630	0.603	0.818
2.4.17	Exclusion by gender index	0.924	0.147	0.789
2.4.18	Women's political rights	0.742	0.450	0.850
2.4.19	Women's economic rights	0.659	0.565	0.850
2.4.20	Political empowerment	0.678	0.541	0.833
				Cronbach's alpha = 0.841

Attribute 3: Rule of Law

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
3.1	Judicial Independence	0.967	0.248	0.938
3.2	Absence of Corruption	0.888	0.212	0.941
3.3	Predictable Enforcement	0.987	0.026	0.912
3.4	Personal Integrity and Security	0.884	0.217	0.937
				Cronbach's alpha = 0.948

3.1. Judicial Independence

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
3.1.1	High court independence	0.924	0.146	0.885
3.1.2	Lower court independence	0.922	0.149	0.886
3.1.3	Compliance with high court	0.911	0.170	0.887
3.1.4	Compliance with judiciary	0.930	0.135	0.885
3.1.5	Independent judiciary	0.785	0.384	0.922
3.1.6	F1 Rule of Law	0.940	0.117	0.912
3.1.7	Separation of power	0.898	0.194	0.904
3.1.8	Independent judiciary	0.915	0.163	0.905
				Cronbach's alpha = 0.912

3.2. Absence of Corruption

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
3.2.1	Public sector corrupt exchanges	0.958	0.082	0.894
3.2.2	Public sector theft	0.963	0.073	0.893
3.2.3	Executive embezzlement and theft	0.942	0.112	0.897
3.2.4	Executive bribery and corrupt exchanges	0.928	0.138	0.898
3.2.5	Corruption	0.763	0.417	0.916
3.2.6	C2 Functioning of Government	0.915	0.163	0.932
3.2.7	Prosecution of office abuse	0.851	0.275	0.931
				Cronbach's alpha = 0.923

3.3. Predictable Enforcement

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
3.3.1	Executive respects constitution	0.865	0.251	0.898
3.3.2	Transparent laws with predictable enforcement	0.928	0.140	0.897
3.3.3	Rigorous and impartial public administration	0.941	0.115	0.894
3.3.4	Criteria for appointment decisions in the state administration	0.823	0.323	0.901
3.3.5	Criteria for appointment decisions in the armed forces	0.798	0.363	0.900
3.3.6	Bureaucratic quality	0.789	0.378	0.901
3.3.7	Law and order	0.696	0.516	0.910
3.3.8	C3 Functioning of Government	0.886	0.215	0.916
3.3.9	Monopoly on the use of force	0.701	0.508	0.918
3.3.10	Basic administration	0.804	0.354	0.915
				Cronbach's alpha = 0.914

3.4. Personal integrity and security

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
3.4.1	Freedom from torture	0.946	0.105	0.782
3.4.2	Freedom from political killings	0.946	0.106	0.778
3.4.3	Political Terror Scale	0.779	0.393	0.840
3.4.4	Internal conflict	0.666	0.557	0.835
3.4.5	Physical integrity rights index	0.806	0.350	0.817
3.4.6	G4 Personal Autonomy and Individual Rights	0.899	0.192	0.845
3.4.7	F3 Rule of Law	0.962	0.075	0.833
				Cronbach's alpha = 0.844

Attribute 4: Participation

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
4.1	Civil Society	0.914	0.165	0.436
4.2	Civic Engagement	0.832	0.308	0.558
4.3	Electoral Participation	0.495	0.755	0.837
				Cronbach's alpha = 0.720

4.1. Civil Society

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
4.1.1	CSO participatory environment	0.881	0.223	0.744
4.1.2	Engaged society	0.890	0.208	0.726
4.1.3	CSO consultation	0.909	0.173	0.729
4.1.4	EPI - E-participation Index	0.719	0.482	0.851
4.1.5	Interest groups	0.855	0.269	0.808
4.1.6	Social capital	0.835	0.303	0.817
				Cronbach's alpha = 0.821

4.2. Civic Engagement

No.	Component	Loading	Uniqueness	Cronbach's alpha if item deleted
4.2.1	Engagement in independent non-political associations	0.791	0.374	0.715
4.2.2	Engagement in independent political associations	0.862	0.258	0.659
4.2.3	Engagement in independent trade unions	0.846	0.285	0.673
4.2.4	Civil society traditions	0.645	0.583	0.837
				Cronbach's alpha = 0.791

Annex F. Item–item correlations

The tables in this Annex present the pairwise bivariate correlation coefficients (Pearson's r) for each of the clusters of indicators that were subsequently aggregated into subcomponents, subattributes or attributes. While the cells above the diagonal list the coefficients, the cells below the diagonal contain the respective numbers of observations (country-years).

ATTRIBUTE 1. REPRESENTATION

No.	Component	1.1	1.2	1.3	1.4	1.5	1.6
1.1	Credible elections	–	0.817	0.846	0.938	0.928	0.775
1.2	Inclusive suffrage	7718	–	0.563	0.778	0.785	0.469
1.3	Free political parties	7830	7718	–	0.886	0.804	0.787
1.4	Elected Government	7830	7718	7830	–	0.897	0.764
1.5	Effective Parliament	7830	7718	7830	7830	–	0.728
1.6	Local Democracy	7807	7695	7807	7807	7807	–

1.1. Credible Elections

No.	Component	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.1.9	1.1.10
1.1.1	EMB autonomy	–	0.797	0.807	0.893	0.922	0.824	0.941	0.928	0.916	0.926
1.1.2	EMB capacity	7830	–	0.825	0.778	0.798	0.634	0.844	0.819	0.829	0.817
1.1.3	Election other voting irregularities	7718	7718	–	0.842	0.857	0.673	0.885	0.873	0.883	0.830
1.1.4	Election government intimidation	7718	7718	7718	–	0.942	0.796	0.922	0.916	0.919	0.897
1.1.5	Election free and fair	7718	7718	7718	7718	–	0.814	0.933	0.922	0.921	0.907
1.1.6	Competition	7829	7829	7717	7717	7717	–	0.897	0.914	0.858	0.825
1.1.7	A3 Electoral process	2723	2723	2723	2723	2723	2723	–	0.949	0.938	0.934
1.1.8	B2 Political Pluralism and Participation	2723	2723	2723	2723	2723	2723	2723	–	0.932	0.917
1.1.9	B3 Political Pluralism and Participation	2723	2723	2723	2723	2723	2723	2723	2723	–	0.915
1.1.10	Free and fair elections	2953	2953	2953	2953	2953	2953	2268	2268	2268	–

1.3. Free Political Parties

No.	Component	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.3.7	1.3.8
1.3.1	Party ban	–	0.898	0.895	0.809	0.713	0.790	0.644	0.637
1.3.2	Barriers to parties	7830	–	0.885	0.827	0.755	0.771	0.782	0.680
1.3.3	Opposition parties' autonomy	7635	7635	–	0.785	0.755	0.746	0.826	0.712
1.3.4	Elections multiparty	7718	7718	7523	–	0.736	0.880	0.725	0.664
1.3.5	Competitiveness of participation	7253	7253	7088	7142	–	0.683	0.776	0.727
1.3.6	Multiparty elections	7829	7829	7634	7717	7252	–	0.599	0.567
1.3.7	B1 Political Pluralism and Participation	1903	1903	1874	1903	1780	1903	–	0.775
1.3.8	Party System	2169	2169	2126	2169	2081	2169	1431	–

1.4. Elected Government

No.	Component	1.4.1	1.4.2	1.4.3	1.4.4	1.4.5	1.4.6	1.4.7	1.4.9
1.4.1	Elected officials index	–	0.560	0.666	0.743	0.750	0.765	0.741	0.686
1.4.2	Competitiveness of executive recruitment	7421	–	0.613	0.779	0.916	0.911	0.897	0.886
1.4.3	Openness of executive recruitment	7421	7421	–	0.688	0.769	0.770	0.749	0.648
1.4.4	Electoral	7829	7420	7420	–	0.849	0.874	0.841	0.880
1.4.5	A1 Electoral Process	2723	2639	2639	2723	–	0.962	0.962	0.935
1.4.6	A2 Electoral Process	2723	2639	2639	2723	2723	–	0.957	0.948
1.4.7	C1 Functioning of Government	2723	2639	2639	2723	2723	2723	–	0.922
1.4.9	Lexical index of electoral democracy	7828	7420	7420	7828	2723	2723	2723	–

1.5. Effective Parliament

No.	Component	1.5.1	1.5.2	1.5.3	1.5.4	1.5.5
1.5.1	Legislature questions officials in practice	–	0.849	0.874	0.853	0.820
1.5.2	Executive oversight	7830	–	0.904	0.872	0.821
1.5.3	Legislature investigates in practice	7830	7830	–	0.898	0.847
1.5.4	Legislature opposition parties	7830	7830	7830	–	0.877
1.5.5	Executive constraints	7443	7443	7443	7443	–

1.6. Local democracy

No.	Component	1.6.1	1.6.2
1.6.1	Local government index		0.625
1.6.2	Subnational elections free and fair	7171	

ATTRIBUTE 2. RIGHTS

No.	Component	2.1	2.2	2.3	2.4
2.1	Access to justice	–	0.839	0.673	0.806
2.2	Civil liberties	7830	–	0.550	0.751
2.3	Basic Welfare	7830	7830	–	0.740
2.4	Political Equality	7830	7830	7830	–

2.1. Access to Justice

No.	Component	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7
2.1.1	Access to justice for men	–	0.952	0.660	0.616	0.836	0.815	0.775
2.1.2	Access to justice for women	7830	–	0.650	0.611	0.833	0.815	0.777
2.1.3	Judicial corruption decision	7800	7800	–	0.644	0.706	0.721	0.551
2.1.4	Judicial accountability	7830	7830	7800	–	0.602	0.583	0.353
2.1.5	Fair trial	7792	7792	7762	7792	–	0.860	0.781
2.1.6	F2 Rule of Law	1903	1903	1903	1903	1903	–	0.819
2.1.7	Civil Rights	2169	2169	2169	2169	2169	1431	–

2.2.C. Freedom of association and assembly

No.	Component	2.2.21	2.2.22	2.2.23	2.2.24	2.2.25	2.2.26	2.2.27	2.2.28	2.2.29	2.2.30
2.2.21	CSO entry and exit	–	0.893	0.847	0.827	0.714	0.495	0.792	0.823	0.719	0.794
2.2.22	CSO repression	7830	–	0.882	0.813	0.698	0.599	0.837	0.858	0.764	0.809
2.2.23	Freedom of peaceful assembly	7803	7803	–	0.820	0.723	0.608	0.870	0.840	0.791	0.819
2.2.24	Freedom of association and assembly	7792	7792	7765	–	0.808	0.577	0.840	0.846	0.770	0.794
2.2.25	Freedom of assembly and association	6538	6538	6523	6538	–	0.524	0.726	0.724	0.650	0.640
2.2.26	Workers' rights	4526	4526	4523	4526	4378	–	0.639	0.620	0.661	0.464
2.2.27	E1 Associational and Organizational Rights	1903	1903	1899	1903	1875	1531	–	0.905	0.840	0.852
2.2.28	E2 Associational and Organizational Rights	1903	1903	1899	1903	1875	1531	1903	–	0.853	0.864
2.2.29	E3 Associational and Organizational Rights	1903	1903	1899	1903	1875	1531	1903	1903	–	0.793
2.2.30	Association/ assembly rights	2169	2169	2165	2169	2149	1881	1431	1431	1431	–

2.2.D. Freedom of religion

No.	Component	2.2.31	2.2.32	2.2.33	2.2.34	2.2.35
2.2.31	Freedom of religion	–	0.773	0.721	0.606	0.784
2.2.32	Religious organization repression	7830	–	0.680	0.570	0.722
2.2.33	Freedom of thought, conscience and religion	7792	7792	–	0.725	0.773
2.2.34	Freedom of religion	6768	6768	6766	–	0.674
2.2.35	D2 Freedom of Expression and Belief	1903	1903	1903	1882	–

2.2.E. Freedom of movement

No.	Component	2.2.41	2.2.42	2.2.43	2.2.44	2.2.45	2.2.46	2.2.47
2.2.41	Freedom of foreign movement	–	0.698	0.748	0.668	0.559	0.453	0.705
2.2.42	Freedom of domestic movement for women	7830	–	0.711	0.587	0.537	0.426	0.694
2.2.43	Freedom of domestic movement for men	7830	7830	–	0.589	0.445	0.427	0.568
2.2.44	Freedom of movement and residence	7792	7792	7792	–	0.627	0.620	0.689
2.2.45	Freedom of foreign movement	6770	6770	6770	6768	–	0.540	0.586
2.2.46	Freedom of domestic movement	6768	6768	6768	6766	6765	–	0.588
2.2.47	G1 Personal Autonomy and Individual Rights	1903	1903	1903	1903	1878	1878	–

2.3. Basic welfare

No.	Component	2.3.1	2.3.2	2.3.3	2.3.4	2.3.5	2.3.6	2.3.7
2.3.1	Infant mortality rate	–	0.955	0.796	0.79	0.868	0.714	0.76
2.3.2	Life expectancy	7684	–	0.789	0.726	0.816	0.674	0.735
2.3.3	Kilocalories per person per day	7037	7072	–	0.560	0.734	0.61	0.668
2.3.4	Literacy	4991	4997	4642	–	0.846	0.624	0.626
2.3.5	Average years of schooling	7678	7733	7136	4997	–	0.691	0.688
2.3.6	Educational equality	7693	7748	7136	4997	7799	–	0.899
2.3.7	Health equality	7693	7748	7136	4997	7799	7830	–

2.4. Political equality

No.	Component	2.4.A	2.4.B
2.4.A	Social group equality		0.840
2.4.B	Gender equality	7830	

2.4.A. Social group equality

No.	Component	2.4.1	2.4.2	2.4.3	2.4.4	2.4.5	2.4.6	2.4.7	2.4.8	2.4.9	2.4.10	2.4.11	2.4.12
2.4.1	Social class equality in respect for civil liberties	–	0.752	0.684	0.677	0.591	0.826	0.660	0.778	0.730	0.643	0.706	0.559
2.4.2	Social group equality in respect for civil liberties	7830	–	0.529	0.724	0.550	0.661	0.619	0.788	0.589	0.663	0.688	0.458
2.4.3	Power distributed by socio-economic position	7830	7830	–	0.579	0.551	0.668	0.495	0.613	0.551	0.595	0.616	0.381
2.4.4	Power distributed by social group	7830	7830	7830	–	0.578	0.647	0.668	0.801	0.582	0.717	0.702	0.389
2.4.5	Power distributed by sexual orientation	7830	7830	7830	7830	–	0.595	0.610	0.677	0.561	0.678	0.698	0.542
2.4.6	Exclusion by socio-economic group index	7811	7811	7811	7811	7811	–	0.757	0.887	0.913	0.603	0.706	0.697
2.4.7	Exclusion by political group index	7791	7791	7791	7791	7791	7791	–	0.844	0.764	0.694	0.753	0.612
2.4.8	Exclusion by social group index	7796	7796	7796	7796	7796	7796	7791	–	0.824	0.725	0.781	0.681
2.4.9	Exclusion by urban-rural location index	7796	7796	7796	7796	7796	7796	7791	7796	–	0.575	0.661	0.728
2.4.10	B4 Political Pluralism and Participation	1903	1903	1903	1903	1903	1900	1900	1900	1900	–	0.845	0.571
2.4.11	F4 Rule of Law	1903	1903	1903	1903	1903	1900	1900	1900	1900	1903	–	0.648
2.4.12	Equal opportunity	2169	2169	2169	2169	2169	2167	2167	2167	2167	1431	1431	–

2.4.B. Gender equality

No.	Component	2.4.13	2.4.14	2.4.15	2.4.16	2.4.17	2.4.18	2.4.19	2.4.20
2.4.13	Power distributed by gender	–	0.715	0.490	0.505	0.789	0.514	0.472	0.550
2.4.14	CSO women's participation	7830	–	0.549	0.423	0.750	0.453	0.439	0.433
2.4.15	Female vs. male mean years of schooling	7799	7799	–	0.407	0.667	0.329	0.376	0.178
2.4.16	Lower chamber female legislators	7170	7170	7145	–	0.465	0.693	0.268	0.770
2.4.17	Exclusion by gender index	7811	7811	7796	7152	–	0.488	0.547	0.405
2.4.18	Women's political rights	6362	6362	6349	5999	6359	–	0.326	0.635
2.4.19	Women's economic rights	6311	6311	6298	5953	6308	6293	–	0.415
2.4.20	Political empowerment	1926	1926	1926	1905	1923	1769	1771	–

ATTRIBUTE 3. RULE OF LAW

No.	Component	3.1	3.2	3.3	3.4
3.1	Judicial Independence	–	0.770	0.852	0.803
3.2	Absence of Corruption	7830	–	0.879	0.756
3.3	Predictable Enforcement	7830	7830	–	0.873
3.4	Personal Integrity and Security	7830	7830	7830	–

3.1. Judicial independence

No.	Component	3.1.1	3.1.2	3.1.3	3.1.4	3.1.5	3.1.6	3.1.7	3.1.8
3.1.1	High court independence	–	0.906	0.783	0.803	0.632	0.797	0.714	0.728
3.1.2	Lower court independence	7803	–	0.780	0.799	0.650	0.797	0.709	0.730
3.1.3	Compliance with high court	7800	7800	–	0.891	0.650	0.817	0.731	0.743
3.1.4	Compliance with judiciary	7800	7800	7800	–	0.672	0.828	0.729	0.762
3.1.5	Independent judiciary	6723	6744	6720	6720	–	0.764	0.534	0.623
3.1.6	F1 Rule of Law	1903	1903	1903	1903	1861	–	0.807	0.853
3.1.7	Separation of power	2169	2169	2169	2169	2139	1431	–	0.894
3.1.8	Independent judiciary	2169	2169	2169	2169	2139	1431	2169	–

3.2. Absence of corruption

No.	Component	3.2.1	3.2.2	3.2.3	3.2.4	3.2.5	3.2.6	3.2.7
3.2.1	Public sector corrupt exchanges	–	0.908	0.857	0.85	0.679	0.818	0.717
3.2.2	Public sector theft	7830	–	0.867	0.832	0.685	0.822	0.704
3.2.3	Executive embezzlement and theft	7830	7830	–	0.875	0.653	0.782	0.647
3.2.4	Executive bribery and corrupt exchanges	7830	7830	7830	–	0.668	0.783	0.646
3.2.5	Corruption	5142	5142	5142	5142	–	0.81	0.65
3.2.6	C2 Functioning of Government	1903	1903	1903	1903	1509	–	0.797
3.2.7	Prosecution of office abuse	2169	2169	2169	2169	1773	1431	–

3.3. Predictable enforcement

No.	Component	3.3.1	3.3.2	3.3.3	3.3.4	3.3.5	3.3.6	3.3.7	3.3.8	3.3.9	3.3.10
3.3.1	Executive respects constitution	–	0.789	0.777	0.661	0.701	0.646	0.515	0.753	0.317	0.500
3.3.2	Transparent laws with predictable enforcement	7830	–	0.859	0.676	0.658	0.628	0.516	0.781	0.389	0.489
3.3.3	Rigorous and impartial public administration	7830	7830	–	0.663	0.660	0.667	0.591	0.762	0.473	0.588
3.3.4	Criteria for appointment decisions in the state administration	7560	7560	7560	–	0.783	0.648	0.471	0.705	0.359	0.512
3.3.5	Criteria for appointment decisions in the armed forces	7544	7544	7544	7544	–	0.625	0.467	0.738	0.369	0.563
3.3.6	Bureaucratic quality	5142	5142	5142	4961	4955	–	0.667	0.601	0.503	0.672
3.3.7	Law and order	5142	5142	5142	4961	4955	5142	–	0.431	0.542	0.529
3.3.8	C3 Functioning of Government	1903	1903	1903	1903	1903	1509	1509	–	0.358	0.497
3.3.9	Monopoly on the use of force	2169	2169	2169	2169	2169	1773	1773	1431	–	0.777
3.3.10	Basic administration	2169	2169	2169	2169	2169	1773	1773	1431	2169	–

3.4. Personal integrity and security

No.	Component	3.4.1	3.4.2	3.4.3	3.4.4	3.4.5	3.4.6	3.4.7
3.4.1	Freedom from torture	–	0.900	0.636	0.552	0.686	0.795	0.859
3.4.2	Freedom from political killings	7830	–	0.662	0.595	0.697	0.739	0.833
3.4.3	Political Terror Scale	7532	7532	–	0.613	0.838	0.672	0.800
3.4.4	Internal conflict	5142	5142	5106	–	0.581	0.610	0.668
3.4.5	Physical integrity rights index	6525	6525	6506	4992	–	0.621	0.776
3.4.6	G4 Personal Autonomy and Individual Rights	1903	1903	1903	1509	1888	–	0.816
3.4.7	F3 Rule of Law	1903	1903	1903	1509	1888	1903	–

ATTRIBUTE 4. PARTICIPATION

No.	Component	4.1	4.2	4.3
4.1	Civil Society	–	0.744	0.471
4.2	Civic Engagement	7782	–	0.399
4.3	Electoral Participation	6955	6907	–

4.1. Civil society

No.	Component	4.1.1	4.1.2	4.1.3	4.1.4	4.1.5	4.1.6
4.1.1	CSO participatory environment	–	0.747	0.785	0.205	0.560	0.511
4.1.2	Engaged society	7830	–	0.814	0.314	0.637	0.603
4.1.3	CSO consultation	7830	7830	–	0.264	0.568	0.552
4.1.4	EPI - E-participation Index	3389	3389	3389	–	0.320	0.305
4.1.5	Interest groups	2169	2169	2169	2139	–	0.843
4.1.6	Social capital	2169	2169	2169	2139	2169	–

4.2. Civic Engagement

No.	Component	4.2.1	4.2.2	4.2.3	4.2.4
4.2.1	Engagement in independent non-political associations	–	0.618	0.607	0.261
4.2.2	Engagement in independent political associations	7766	–	0.668	0.500
4.2.3	Engagement in independent trade unions	7763	7763	–	0.417
4.2.4	Civil society traditions	2165	2165	2165	–

Annex G. Comparisons with extant measures

Version 4 of the Technical Procedures Guide contains extensive tables that show the relationships between aspects of the GSoD Indices and datasets from other sources. We have not updated those tables for Version 7.

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The International Institute for Democracy and Electoral Assistance (International IDEA) is an intergovernmental organization with 35 Member States founded in 1995, with a mandate to support sustainable democracy worldwide.

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The Global State of Democracy is a report that aims to provide policymakers with an evidence-based analysis of the state of global democracy, supported by the Global State of Democracy Indices (GSoD Indices), in order to inform policy interventions and identify problem-solving approaches to trends affecting the quality of democracy around the world.

This document revises and updates the conceptual and measurement framework that guided the construction of Version 7 of the GSoD Indices, which depicts democratic trends at the country, regional and global levels across a broad range of different attributes of democracy in the period 1975–2022.

The data underlying the GSoD Indices is based on a total of 157 indicators developed by various scholars and organizations using different approaches, including expert surveys, standards-based coding by research groups and analysts, observational data and composite measures.