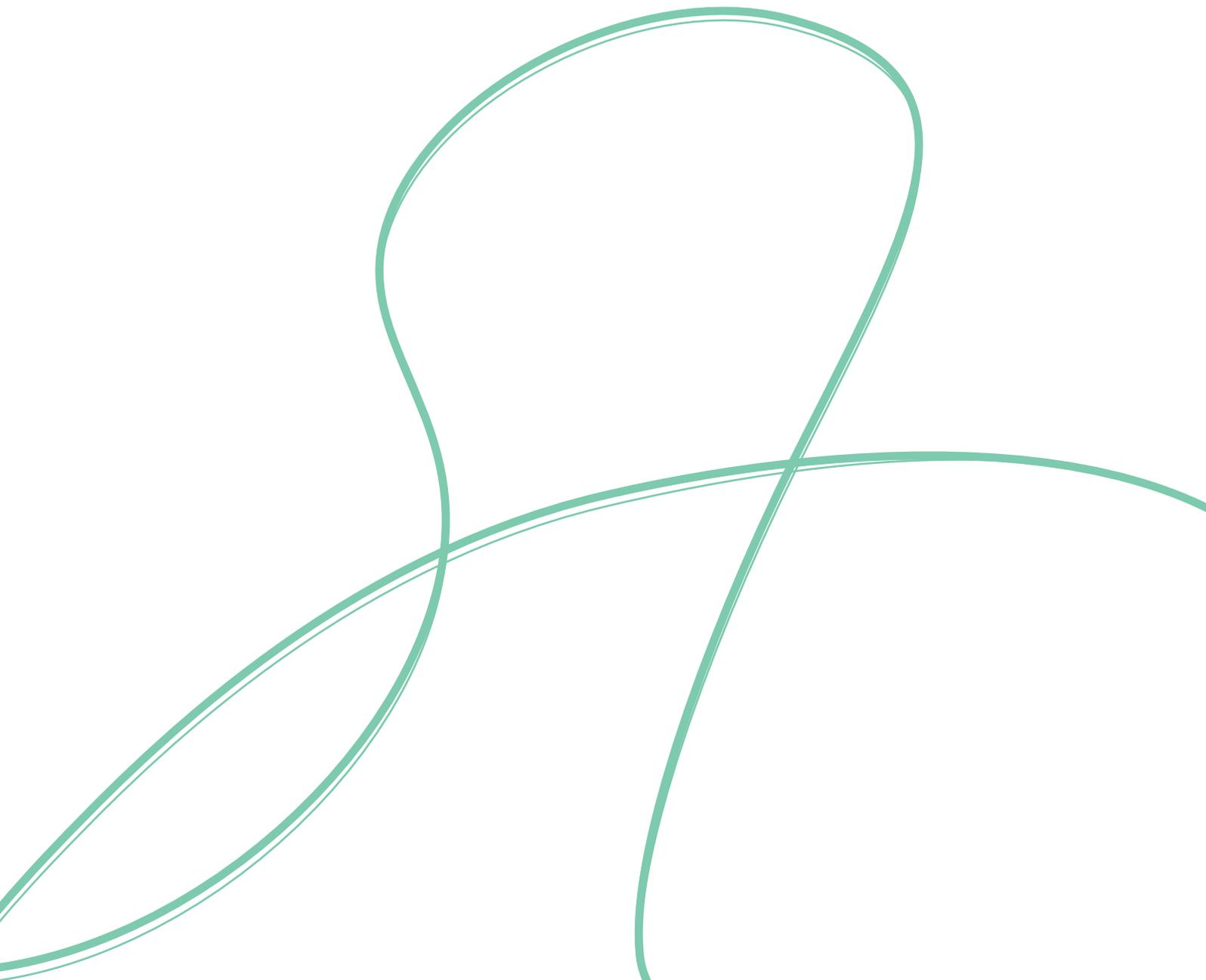# The Global State of Democracy Indices Technical Procedures Guide

Version 4 (2020)

The Global State of Democracy Indices Technical Procedures Guide

Version 4 (2020)

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Contents

Acknowledgements

About this document

The Global State of Democracy Indices: Technical Procedures Guide, Version 4 is the second in a series 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 4* (Skaaning 2020), which presents the theoretical framework that guided the construction of the Indices, and *The Global State of Democracy Indices Codebook, Version 4* (Tufis 2020), 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 1975–2019 but do not provide a single index of democracy. The Indices produce data for 163 countries. The data underlying the Indices is based on 116 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 biennial 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 2019 edition of the report (International IDEA 2019), provides a global health check of democracy.

The full publication, as well as the GSoD Indices Database, can be accessed online:
   <http://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 2019: Addressing the Ills, Reviving the Promise* (International IDEA 2019). 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 4* (Skaaning 2020).

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 merger (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 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 2019: Addressing the Ills, Reviving the Promise* (International IDEA 2019) is an example of how the GSoD Indices can be used to track trends in democratic development. The GSoD Indices, which were constructed for the first time in 2017 and then updated in 2018, cover the 163 independent countries with a population of more than one million that existed in the period 1975–2019. The Indices are composite measures based on 116 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 each index, 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 construction 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 2019). 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 2019).

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 2019).

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

1. Representative Government (free and equal access to political power)

2. Fundamental Rights (individual liberties and resources)

3. Checks on Government (effective control of executive power)

4. Impartial Administration (fair and predictable public administration)

5. Participatory Engagement (instruments for and realization of political involvement)

In addition, the GSoD conceptual framework contains, at lower levels of abstraction, 16 subattributes and an additional five subcomponents of civil liberties and three subcomponents of social rights and 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). The only exception is the fifth attribute, participatory engagement. This theoretical dimension is conceptually and empirically multidimensional and there are no obvious ways to aggregate its subattributes.

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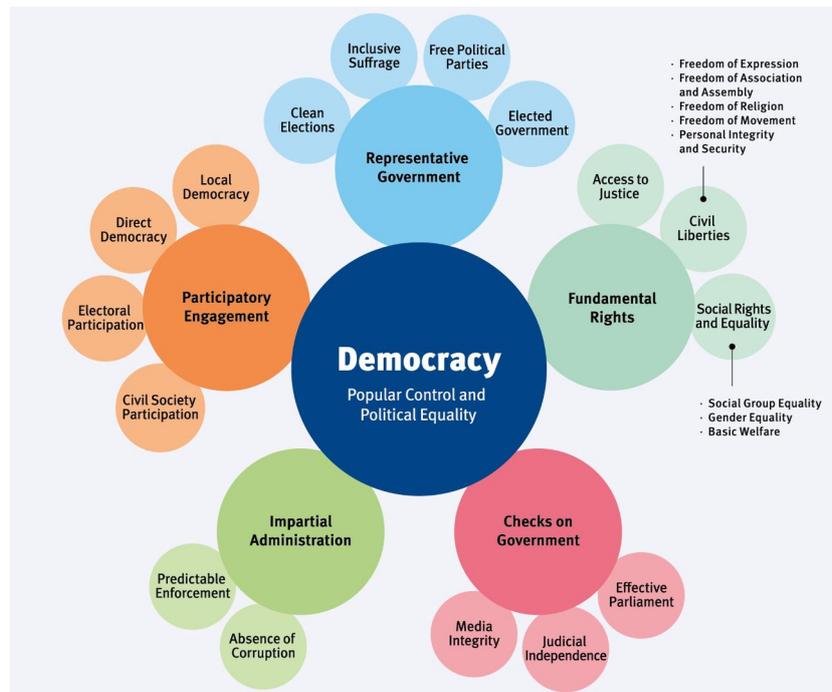
Source: International IDEA

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

Attribute	Subattribute	Assessment question
1. Representative Government (free and equal access to political power)	1.1. Clean 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?
2. Fundamental 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. Social Rights and Equality	To what extent are there basic welfare, and social and political equality?
3. Checks on Government (effective control of executive power)	3.1. Effective Parliament	To what extent does parliament oversee the executive?
	3.2. Judicial Independence	To what extent are the courts independent?
	3.3. Media Integrity	To what extent are there diverse, critical media sources?
4. Impartial Administration (fair and predictable public administration)	4.1. Absence of Corruption	To what extent is the exercise of public authority free from corruption?
	4.2. Predictable Enforcement	To what extent is the enforcement of public authority predictable?
5. Participatory Engagement (instruments of and for the realization of political involvement)	5.1. Civil Society Participation	To what extent do people participate in civil society organizations?
	5.2. Electoral Participation	To what extent do people participate in national elections?
	5.3. Direct Democracy	To what extent are mechanisms of direct democracy available and used?
	5.4. Local Democracy	To what extent are there freely elected, influential local governments?

Source: Skaaning (2019)

1. Data sources

No original data collection was carried out in connection with the construction of the GSoD Indices. International IDEA's GSoD Indices are composite measures based on 116 indicators collected from 12 different data sets.

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 30 years in the period 1975–2019). 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 (2019). Table A.1 (see Annex A) lists the 12 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.

Version 10 of the Varieties of Democracy (V-Dem) data set, released in the Spring of 2020, 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 eight data sets (see Table A.1), the versions available online were downloaded during March–May 2020. Since the Polity IV and Political Terror Scale data sets had not been updated by that time, scores for 2018 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 using various combinations of software, depending on preference and/or experience. In this case, data cleaning was completed using a combination of Excel, SPSS and R, depending on the task.

2. Coverage

The unit of observation for International IDEA's Global State of Democracy Indices is the country–year. The 2020 release of the data set contains data for 163 countries for up to 45 years, giving a total of 6,857 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 all the independent countries in the world with a population of at least one million 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 163 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.

The spatial coverage of the GSoD Indices for the most recent year in the data set (2019) is shown in Figure 2.1. A complete list of the 163 countries included in the GSoD Indices data set is provided in Table B.1 (see Annex B).

Temporal coverage

The fourth edition of International IDEA's GSoD Indices covers the period 1975–2019. 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. 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 2.2, while Table B.1 (see Annex B) indicates the temporal coverage for each of the 158 countries included in the data set.

Figure 2.1. Spatial coverage of International IDEA's Global State of Democracy Indices, 2019

Source: International IDEA.

Figure 2.2. Temporal coverage of International IDEA's Global State of Democracy Indices, 2019
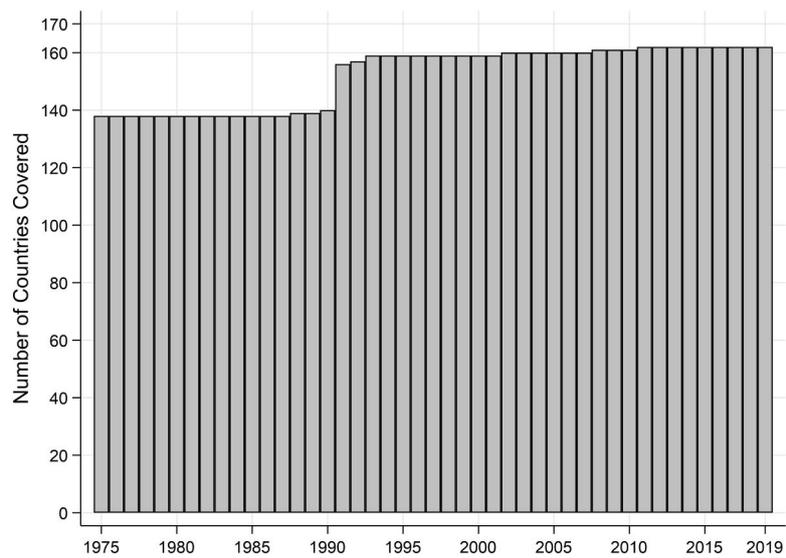
Source: International IDEA.

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 six regions and 17 subregions:

1. Africa (East Africa, Central Africa, Southern Africa, West Africa and North Africa)

2. Latin America and the Caribbean (the Caribbean, Central America and Mexico, and South America)

3. North America

4. Asia and the Pacific (Central Asia, East Asia, South Asia, South East Asia, and Oceania)

5. Middle East and Iran

6. Europe (East-Central Europe, Eastern Europe/Post-Soviet Europe, South Europe, and North and West 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 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 (163 countries with a population of over one million, and the period 1975–2019), the next step was to prepare the various data sources used to be merged into a single data set.

An initial country–year matrix was created containing 7,335 country–years (163 countries over 45 years). However, not all the countries were in existence for the entire period. The German Democratic Republic ceased to exist during the 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 6,857 country–years. In all cases, a standard procedure was followed. 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 12 data sources: the year, the country name, the country code and the country–year. The 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. The country–year variable 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 2019). This resulted in a country–year variable with a value from 21975 to 9202019, 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 geographical regions and subregions. To keep things simple, 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 2020).

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 116 indicators selected from the 12 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 (2020), while detailed information on each of the indicators is available in Tufis (2020).

Step 3: Preparing the indicators for merger

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 or 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 (2020: 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 inversed 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. For example, the percentage of women in ministerial-level positions was coded by the Inter-Parliamentary Union in 1987, 1994, 1998 and 2005, and then every two years from 2008 until 2014 and again in 2015. Starting from the observed values in those years, values were linearly imputed for the missing years using the closest surrounding years.

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.

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 (2020).

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 were 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 representative government index, and a formative model was also used to aggregate indicators related to the presence, and freedom and fairness of local elections (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 .6 to .9, and most of them are higher than .8. Some indicators display only medium correlations of around .4 to .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 .77, while 15 of the 24 Indices computed had a Cronbach's Alpha higher than .90. All but one of the values were above the usually accepted threshold of .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.

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 subattributes belonging to the civil liberties subattribute and for the three belonging to the social rights and 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 social rights and 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.

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).

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.

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).

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

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

Attribute	Aggregation	Subattribute	Aggregation
1. Representative Government (free and equal access to political power)	Bayesian factor analysis of clean elections, free political parties and elected government to create contestation index; thereafter, multiplication of contestation and inclusive suffrage	1.1. Clean Elections	Bayesian factor analysis
		1.2. Inclusive Suffrage	Weighted average
		1.3. Free Political Parties	Item response modelling
		1.4. Elected Government	Item response modelling
2. Fundamental Rights (individual liberties and resources)	Bayesian factor analysis	2.1. Access to Justice	Bayesian factor analysis
		2.2. Civil Liberties	First item response modelling. Thereafter, Bayesian factor analysis to estimate subattribute.
		2.3. Social Rights and Equality	First item response modelling of subcomponents. Thereafter, Bayesian factor analysis to estimate subattribute.
3. Checks on Government (effective control of executive power)	Bayesian factor analysis	3.1. Effective Parliament	Item response modelling
		3.2. Judicial Independence	Item response modelling
		3.3. Media Integrity	Bayesian factor analysis
4. Impartial Administration (fair and predictable public administration)	Bayesian factor analysis	4.1. Absence of Corruption	Item response modelling
		4.2. Predictable Enforcement	Item response modelling
5. Participatory Engagement (instruments for realization of political involvement)	N/A (no obvious way to combine the multidimensional subattributes)	5.1. Civil Society Participation	Item response modelling
		5.2. Electoral Participation	N/A (only one indicator)
		5.3. Direct Democracy	Multiplication
		5.4. Local Democracy	Multiplication

Source: Skaaning (2020).

Step 5: Aggregating the indicators into Indices

Representative Government: Due to missing data, two subattributes (free political parties and elected government) were aggregated using IRT. The clean elections subattribute is composed of indicators that do not suffer from high levels of missing data, so this was aggregated using BFA. The inclusive elections subattribute was computed as a weighted average of its two indicators. In a final step, all the country–years without an electoral regime according to V-Dem were scored the minimum value of 0.

The suffrage indicator was combined with the other three subattribute Indices to construct an overall Representative Government 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 Representative Government index is based on a multiplication of the suffrage scores and the normalized scores for the contestation index.

Fundamental Rights: Since none of the indicators linked to Access to Justice have significant amounts of missing data, they were combined using BFA. Regarding the second subattribute of Fundamental 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 social rights and equality subattribute, which were then combined in the subattribute using BFA. Finally, the three Fundamental Rights subattributes were aggregated into the fundamental rights index using BFA.

Checks on Government: Three reflective Indices were created—on effective parliament, judicial independence and media integrity—using IRT in the first two cases (due to the significant gaps in some of the indicators) and BFA in the latter case. These Indices were then aggregated into a more general index using BFA, as they tend to reflect a common underlying dimension, which was interpreted as checks on government.

Impartial Administration: Since the ICRG indicators had substantial deficiencies in coverage, the two Indices constructed from the indicators grouped with absence of corruption and predictable enforcement were based on IRT modelling. These were then used to construct an Impartial Administration index based on BFA scores.

Participatory Engagement: On its subattributes, no aggregation was needed for electoral participation, since only one indicator was used. The three indicators on civil society participation clearly tapped into a common dimension. They were aggregated into an index using IRT modelling. For direct democracy we used an existing index and multiplied it with the electoral measure from Bjørnskov and Rode. For local democracy, a formative aggregation formula was chosen, which took into account the reinforcing relationship between the mere existence of subnational elections and their freeness and fairness.

The relationship between the subattributes and the overarching attribute is less evident for Participatory Engagement, and the subattribute Indices linked to this attribute are not highly correlated. This could reflect the fact that they capture fairly distinct phenomena even though they are all conceptually related as expressions of popular participation. Aggregation through reflective models did not appear plausible. As it is also unclear from extant theory whether the different aspects of popular participation stand in an interactive and/or substitutable relationship with each other, there was no aggregation to the attribute level. Users are encouraged to use the subattribute Indices.

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 clean elections, elected government, direct democracy and local elections 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:

$$x'_i = (x_i - \min(x_i)) / (\max(x_i) - \min(x_i))$$

where xi 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.

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 not statistically significant. 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 (5.2), which is composed of a single indicator, and the inclusive suffrage (1.2), direct democracy (5.3) and local democracy (5.4) subattributes, which are aggregated using a formative formula.

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 Kray 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.

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.

The correlations between the GSoD Indices and existing data sets that measure relatively similar concepts are shown in Annex G. For more information see Skaaning (2020). Overall, the correlations presented in Annex G offer sufficient evidence that the GSoD Indices are characterized by high levels of validity and reliability.

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 2020). If the reader is interested in a particular indicator used, more information is available in the GSoD Codebook (Tufis 2020). 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, F and G).

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Annex A. Sources

Table A.1. Data sets used for collecting indicators

Data set	Type of data	No. of indicators	Spatial coverage	Temporal coverage
Bjørnskov-Rode Regime Data (BRRD)	IC	1	208 countries	1950–2019
Civil Liberties Dataset (CLD)	IC	5	203 countries	1975–2019
Food and Agriculture Organization (FAO)	OD	1	184 countries	1961–2017
Institute for Health Metrics and Evaluation (IHME)	OD	2	189 countries	1970–2015
International Country Risk Guide (ICRG)	ES	6	146 countries	1984–2019
Lexical Index of Electoral Democracy (LIED)	IC, OD	4	All independent	1800–2019
Media Freedom Data (MFD)	IC	1	187 countries	1948–2019
Political Terror Scale (PTS)	IC	1	211 countries	1976–2018
Polity V	IC	4	180 countries	1800–2018
UNESCO Institute of Statistics (UIS)	OD	3	varying	Varying
CIRIGHTS Human Rights Data Project (CIRIGHTS)	IC	10	205 countries	1981–2017
Varieties of Democracy (V-Dem)	CM, ES, IC, OD	80	201 countries	1789–2019

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	2019	45
Albania	1975	2019	45
Algeria	1975	2019	45
Angola	1975	2019	45
Argentina	1975	2019	45
Armenia	1991	2019	29
Australia	1975	2019	45
Austria	1975	2019	45
Azerbaijan	1991	2019	29
Bangladesh	1975	2019	45
Barbados	1975	2019	45
Belarus	1991	2019	29
Belgium	1975	2019	45
Benin	1975	2019	45
Bolivia	1975	2019	45
Bosnia and Herzegovina	1992	2019	28
Botswana	1975	2019	45
Brazil	1975	2019	45
Bulgaria	1975	2019	45
Burkina Faso	1975	2019	45
Burundi	1975	2019	45

Country	First Year	Last Year	Country–years
Cambodia	1975	2019	45
Cameroon	1975	2019	45
Canada	1975	2019	45
Cape Verde	1975	2019	45
Central African Republic	1975	2019	45
Chad	1975	2019	45
Chile	1975	2019	45
China	1975	2019	45
Colombia	1975	2019	45
Costa Rica	1975	2019	45
Côte d'Ivoire	1975	2019	45
Croatia	1991	2019	29
Cuba	1975	2019	45
Cyprus	1975	2019	45
Czechia	1975	2019	45
Democratic People's Republic of Korea	1975	2019	45
Democratic Republic of the Congo	1975	2019	45
Denmark	1975	2019	45
Dominican Republic	1975	2019	45
Ecuador	1975	2019	45
Egypt	1975	2019	45
El Salvador	1975	2019	45
Eritrea	1993	2019	27
Estonia	1991	2019	29
Eswatini	1975	2019	45
Ethiopia	1975	2019	45
Finland	1975	2019	45
France	1975	2019	45
Gabon	1975	2019	45
Gambia	1975	2019	45
Georgia	1991	2019	29
German Democratic Republic	1975	1990	16
Germany	1975	2019	45
Ghana	1975	2019	45

Country	First Year	Last Year	Country–years
Greece	1975	2019	45
Guatemala	1975	2019	45
Guinea	1975	2019	45
Guinea-Bissau	1975	2019	45
Haiti	1975	2019	45
Honduras	1975	2019	45
Hungary	1975	2019	45
Iceland	1975	2019	45
India	1975	2019	45
Indonesia	1975	2019	45
Iran	1975	2019	45
Iraq	1975	2019	45
Ireland	1975	2019	45
Israel	1975	2019	45
Italy	1975	2019	45
Jamaica	1975	2019	45
Japan	1975	2019	45
Jordan	1975	2019	45
Kazakhstan	1991	2019	29
Kenya	1975	2019	45
Kosovo	2008	2019	12
Kuwait	1975	2019	45
Kyrgyzstan	1991	2019	29
Laos	1975	2019	45
Latvia	1991	2019	29
Lebanon	1975	2019	45
Lesotho	1975	2019	45
Liberia	1975	2019	45
Libya	1975	2019	45
Lithuania	1991	2019	29
Luxemoburg	1975	2019	45
Madagascar	1975	2019	45
Malawi	1975	2019	45
Malaysia	1975	2019	45

Country	First Year	Last Year	Country–years
Mali	1975	2019	45
Mauritania	1975	2019	45
Mauritius	1975	2019	45
Mexico	1975	2019	45
Moldova	1991	2019	29
Mongolia	1975	2019	45
Morocco	1975	2019	45
Mozambique	1975	2019	45
Myanmar	1975	2019	45
Namibia	1990	2019	30
Nepal	1975	2019	45
Netherlands	1975	2019	45
New Zealand	1975	2019	45
Nicaragua	1975	2019	45
Niger	1975	2019	45
Nigeria	1975	2019	45
North Macedonia	1991	2019	29
Norway	1975	2019	45
Oman	1975	2019	45
Pakistan	1975	2019	45
Palestine/West Bank	1988	2019	32
Panama	1975	2019	45
Papua New Guinea	1975	2019	45
Paraguay	1975	2019	45
Peru	1975	2019	45
Philippines	1975	2019	45
Poland	1975	2019	45
Portugal	1975	2019	45
Qatar	1975	2019	45
Republic of Congo	1975	2019	45
Republic of Korea	1975	2019	45
Romania	1975	2019	45
Russia	1975	2019	45
Rwanda	1975	2019	45

Country	First Year	Last Year	Country–years
Saudi Arabia	1975	2019	45
Senegal	1975	2019	45
Serbia	1975	2019	45
Sierra Leone	1975	2019	45
Singapore	1975	2019	45
Slovakia	1993	2019	27
Slovenia	1991	2019	29
Somalia	1975	2019	45
South Africa	1975	2019	45
South Sudan	2011	2019	9
Spain	1975	2019	45
Sri Lanka	1975	2019	45
Sudan	1975	2019	45
Sweden	1975	2019	45
Switzerland	1975	2019	45
Syria	1975	2018	45
Taiwan	1975	2019	45
Tajikistan	1991	2019	29
Tanzania	1975	2019	45
Thailand	1975	2019	45
Timor-Leste	2002	2019	18
Togo	1975	2019	45
Trinidad and Tobago	1975	2019	45
Tunisia	1975	2019	45
Turkey	1975	2019	45
Turkmenistan	1991	2019	29
Uganda	1975	2019	45
Ukraine	1991	2019	29
United Kingdom	1975	2019	45
United States	1975	2019	45
Uruguay	1975	2019	45
Uzbekistan	1991	2019	29
Venezuela	1975	2019	45
Viet Nam	1975	2019	45

Country	First Year	Last Year	Country–years
Yemen	1975	2019	45
Zambia	1975	2019	45
Zimbabwe	1975	2019	45

Note: 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, 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, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo
North Africa	Algeria, Egypt, Libya, Morocco, South Sudan, Sudan, Tunisia
Latin America and the Caribbean	
The Caribbean	Barbados, Cuba, Dominican Republic, Haiti, Jamaica, Trinidad and Tobago
Central America and Mexico	Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama
South America	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela
North America	
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, India, Nepal, Pakistan, Sri Lanka
South East Asia	Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam
Oceania	Australia, New Zealand, Papua New Guinea
The Middle East and Iran	
The Middle East	Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestine/West Bank, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen
Iran	Iran
Europe	
East-Central Europe	Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, German Democratic Republic, Hungary, Kosovo, Latvia, Lithuania, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia
Eastern Europe/ Post-Soviet Europe	Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia, Ukraine
North and West Europe	Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom
South Europe	Cyprus, Greece, Israel, Italy, Portugal, Spain, Turkey

Note: 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, Cape Verde, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo (DRC), 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, Republic of Congo, 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, Colobia, 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, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, United States, Uruguay, Venezuela

Annex D. Attributes, subattributes and indicators

Table D.1. Attributes, subattributes, assessment questions and empirical indicators

Attributes	Subattributes	Assessment questions	No.	Indicators
1. Representative Government	1.1. Clean 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
	1.2. 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
	1.4. 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

Attributes	Subattributes	Assessment questions	No.	Indicators
			1.4.4	Electoral
2. Fundamental Rights	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
	2.2. Civil Liberties	To what extent are civil liberties respected?	Sub-component 2.2.A: Freedom of expression	
			2.2.1	Print/ broadcast censorship effort
			2.2.2	Harassment of journalists
			2.2.3	Media self-censorship
			2.2.4	Freedom of discussion for women
			2.2.5	Freedom of discussion for men
			2.2.6	Freedom of academic and cultural expression
			2.2.7	Freedom of opinion and expression
			2.2.8	Freedom of speech and press
			Sub-component 2.2.B: Freedom of association and assembly	
			2.2.9	CSO entry and exit
			2.2.10	CSO repression
			2.2.11	Freedom of peaceful assembly
			2.2.12	Freedom of association and assembly
			2.2.13	Freedom of assembly and association
			2.2.14	Worker's rights
			Sub-component 2.2.C: Freedom of religion	
			2.2.15	Freedom of religion
			2.2.16	Religious organization repression
			2.2.17	Freedom of thought, conscience and religion
			2.2.18	Freedom of religion

Attributes	Subattributes	Assessment questions	No.	Indicators
			Sub-component 2.2.D: Freedom of movement	
			2.2.19	Freedom of foreign movement
			2.2.20	Freedom of domestic movement for women
			2.2.21	Freedom of domestic movement for men
			2.2.22	Freedom of movement and residence
			2.2.23	Freedom of foreign movement
			2.2.24	Freedom of domestic movement
			Sub-component 2.2.E: Personal integrity and security	
			2.2.25	Freedom from forced labour for women
			2.2.26	Freedom from forced labour for men
			2.2.27	Freedom from torture
			2.2.28	Freedom from political killings
			2.2.29	Political terror scale
			2.2.30	Internal conflict
			2.2.31	Physical integrity rights index
	2.3. Social Rights and Equality	To what extent are basic welfare and social and political equality realized?	Sub-component 2.3.A: Social group equality	
			2.3.1	Social class equality in respect for civil liberties
			2.3.2	Social group equality in respect for civil liberties
			2.3.3	Power distributed by socio-economic position
			2.3.4	Power distributed by social group
			2.3.5	Representation of disadvantaged social groups
			2.3.6	Exclusion by socio-economic group index
			2.3.7	Exclusion by political group index

Attributes	Subattributes	Assessment questions	No.	Indicators
			2.3.8	Exclusion by social group index
			2.3.9	Exclusion by urban-rural location index
			2.3.10	Religious/ethnic tensions
			Sub-component 2.3.B: Basic welfare	
			2.3.11	Infant mortality rate
			2.3.12	Life expectancy
			2.3.13	Kilocalories per person per day
			2.3.14	Literacy
			2.3.15	Mean years of schooling
			2.3.16	Educational equality
			2.3.17	Health equality
			Sub-component 2.3.C: Gender equality	
			2.3.18	Power distributed by gender
			2.3.19	CSO women's participation
			2.3.20	Female vs. male mean years of schooling
			2.3.21	Lower chamber female legislators
			2.3.22	Exclusion by gender index
			2.3.23	Women's political rights
			2.3.24	Women's ethnic rights
3. Checks on Government	3.1. Effective Parliament	To what extent does parliament oversee the executive?	3.1.1	Legislature questions officials in practice
			3.1.2	Executive oversight
			3.1.3	Legislature investigates in practice
			3.1.4	Legislature: opposition parties
			3.1.5	Executive constraints
	3.2. Judicial Independence	To what extent are the courts independent?	3.2.1	High Court independence
			3.2.2	Lower court independence
			3.2.3	Compliance with higher court
			3.2.4	Compliance with judiciary
			3.2.5	Law and order

Attributes	Subattributes	Assessment questions	No.	Indicators
			3.2.6	Independent judiciary
	3.3. Media Integrity	To what extent are there diverse, critical media?	3.3.1	Critical print/broadcast media
			3.3.2	Print/broadcast media perspectives
			3.3.3	Media bias
			3.3.4	Media corrupt
			3.3.5	Media freedom
4. Impartial Administration	4.1. Absence of Corruption	To what extent is the exercise of public authority free from corruption?	4.1.1	Public sector: corrupt exchanges
			4.1.2	Public sector theft
			4.1.3	Executive embezzlement and theft
			4.1.4	Executive bribery and corrupt exchanges
			4.1.5	Corruption
	4.2. Predictable Enforcement	To what extent is the enforcement of public authority predictable?	4.2.1	Executive respects constitution
			4.2.2	Transparent laws with predictable enforcement
			4.2.3	Rigorous and impartial public administration
			4.2.4	Criteria for appointment decisions in the state administration
			4.2.5	Criteria for appointment decisions in the armed forces
			4.2.6	Bureaucratic quality
5. Participatory Engagement	5.1. Civil Society participation	To what extent do people participate in civil society organizations?	5.1.1	CSO participatory environment
			5.1.2	Engaged society
			5.1.3	CSO consultation
			5.1.4	Engagement in independent non-political associations
			5.1.5	Engagement in independent political associations
			5.1.6	Engagement in independent trade unions
	5.2. Electoral Participation	To what extent do people participate in national elections?	5.2.1	Election voting age population (VAP) turnout

Attributes	Subattributes	Assessment questions	No.	Indicators
	5.3. Direct Democracy	To what extent are mechanisms of direct democracy available and used?	5.3.1	Direct popular vote index
			5.3.2	Electoral
	5.4. Local Democracy	To what extent are there freely elected, influential local governments?	5.4.1	Local government index
			5.4.2	Subnational elections free and fair

Overview of indicators and sources

1. Representative Government

1.1. Indicators of Clean 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

Notes: 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

Notes: 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

Notes: 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

Notes: 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.

2. Fundamental 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 (v2jucorrdc)	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

Notes: 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	Print/broadcast censorship effort (v2mecenefm)	ES: Does the government directly or indirectly attempt to censor the print or broadcast media?	V-Dem
2.2.2	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
2.2.3	Media self-censorship (v2meslfcen)	ES: Is there self-censorship among journalists when reporting on issues that the government considers politically sensitive?	V-Dem
2.2.4	Freedom of discussion for women (v2cldiscw)	ES: Are women able to openly discuss political issues in private homes and in public spaces?	V-Dem
2.2.5	Freedom of discussion for men (v2cldiscm)	ES: Are men able to openly discuss political issues in private homes and in public spaces?	V-Dem
2.2.6	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. Indicators of Civil Liberties (cont.)

No.	Indicator	Description/question	Data set
Freedom of expression (cont.)			
2.2.7	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
2.2.8	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
Freedom of association and assembly			
2.2.9	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
2.2.10	CSO repression (v2csreprss)	ES: Does the government attempt to repress civil society organizations?	V-Dem
2.2.11	Freedom of peaceful assembly (v2caassemb)	ES: To what extent do state authorities respect and protect the right of peaceful assembly?	V-Dem
2.2.12	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
2.2.13	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
2.2.14	Workers' rights (worker)	IC: Workers' rights of association and collective bargaining are severely restricted; somewhat restricted; fully protected.	CIRIGHTS
Freedom of religion			
2.2.15	Freedom of religion (v2clrelig)	ES: Is there freedom of religion?	V-Dem
2.2.16	Religious organization repression (v2csrlgrep)	ES: Does the government attempt to repress religious organizations?	V-Dem
2.2.17	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
2.2.18	Freedom of religion (rel_free)	Government restrictions on religious practices are severe and widespread; moderate; practically absent.	CIRIGHTS
Freedom of movement			
2.2.19	Freedom of foreign movement (v2clfmove)	ES: Is there freedom of foreign travel and emigration?	V-Dem

No.	Indicator	Description/question	Data set
2.2.20	Freedom of domestic movement for women (v2cldmovew)	ES: Do women enjoy freedom of movement within the country?	V-Dem
2.2.21	Freedom of domestic movement for men (v2cldmovem)	ES: Do men enjoy freedom of movement within the country?	V-Dem
2.2.22	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
2.2.23	Freedom of foreign movement (formov)	IC: Foreign movement and travel is severely restricted; somewhat restricted; unrestricted.	CIRIGHTS
2.2.24	Freedom of domestic movement (dommov)	IC: Domestic travel is severely restricted; somewhat restricted; unrestricted.	CIRIGHTS
Personal integrity and security			
2.2.25	Freedom from forced labour for women (v2clslavef)	ES: Are adult women free from servitude and other kinds of forced labour?	V-Dem
2.2.26	Freedom from forced labour for men (v2clslavem)	ES: Are adult men free from servitude and other kinds of forced labour?	V-Dem
2.2.27	Freedom from torture (v2cltort)	ES: Is there freedom from torture?	V-Dem
2.2.28	Freedom from political killings (v2clkill)	ES: Is there freedom from political killings?	V-Dem
2.2.29	Political terror scale (PTSsd)	IC: What is the level of political violence and terror?	Gibney et al.
2.2.30	Internal conflict (D)	ES: Is there political violence in the country? The rating assigned is the sum of three sub-components: civil war/coup threat, terrorism/political violence and civil disorder	ICRG
2.2.31	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

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

2.3. Indicators of Social Rights and Equality

No.	Indicator	Description/question	Data set
Social group equality			
2.3.1	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
2.3.2	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
2.3.3	Power distributed by socio-economic position (v2pepwrses)	ES: Is political power distributed according to socio-economic position?	V-Dem
2.3.4	Power distributed by social group (v2pepwrsoc)	ES: Is political power distributed according to social groups?	V-Dem
2.3.5	Representation of disadvantaged social groups (v2lgdsadlo)	ES: Considering all disadvantaged social groups in the country, how well represented are these groups, as a whole, in the national legislature?	V-Dem
2.3.6	Exclusion by socio-economic Group (v2xpe_exlecon)	ES: Index of political exclusion by socio-economic group.	V-Dem
2.3.7	Exclusion by political group index (v2xpe_exlpol)	ES: Index of political exclusion by political group	V-Dem
2.3.8	Exclusion by social group index (v2xpe_exlsocgr)	ES: Index of political exclusion by social group	V-Dem
2.3.9	Exclusion by urban-rural location index (v2xpe_exlgeo)	ES: Index of political exclusion by urban-rural location	V-Dem
2.3.10	Religious/ethnic tensions	IC: What is the degree of tension within a country attributable to religious divisions, domination, or suppression? What is the degree of tension within a country attributable to racial, nationality, or language divisions?	ICRG
Basic welfare			
2.3.11	Infant mortality rate	OD	UN statistics
2.3.12	Life expectancy	OD	UN statistics
2.3.13	Kilocalories per person per day	OD	FAO
2.3.14	Literacy	OD	UNESCO
2.3.15	Mean years of schooling	OD	GHDx
2.3.16	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
2.3.17	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
Gender equality			

No.	Indicator	Description/question	Data set
2.3.18	Power distributed by gender (v2pepwrgen)	ES: Is political power distributed according to gender?	V-Dem
2.3.19	CSO women's participation (v2csgender)	ES: Are women prevented from participating in civil society organizations?	V-Dem
2.3.20	Female vs. male mean years of schooling	OD	GHDx
2.3.21	Lower chamber female legislators (v2lgfemleg)	OD	V-Dem
2.3.22	Exclusion by gender index (v2xpe_exlgender)	ES: Index of political exclusion by gender	V-Dem
2.3.23	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
2.3.24	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

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

3. Checks on Government (effective control of executive power)

3.1. Indicators of Effective Parliament

No.	Indicator	Description/question	Data set
3.1.1	Legislature questions officials in practice (v2lgqstexp)	ES: In practice, does the legislature routinely question executive branch officials?	V-Dem
3.1.2.	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
3.1.3	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
3.1.4	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
3.1.5	Executive constraints (xconst)	IC: The extent of institutionalized constraints on the decision-making powers of chief executives, whether individuals or collectivities.	Polity

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

3.2. Indicators of Judicial Independence

No.	Indicator	Description/question	Data set
3.2.1	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
3.2.2	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
3.2.3	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
3.2.4	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
3.2.5	Law and order	IC: To what extent is the legal system strong and impartial and to what degree is there popular observance of the law?	ICRG
3.2.6	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

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

3.3. Indicators of Media Integrity

No.	Indicator	Description/question	Data set
3.3.1	Print/broadcast media critical (v2mecrit)	ES: Of the major print and broadcast outlets, how many routinely criticize the government?	V-Dem
3.3.2	Print/broadcast media perspectives (v2merange)	ES: Do the major print and broadcast media represent a wide range of political perspectives?	V-Dem
3.3.3	Media bias (v2mebias)	ES: Is there media bias against opposition parties or candidates?	V-Dem
3.3.4	Media corrupt (v2mecorrpt)	ES: Do journalists, publishers or broadcasters accept payments in exchange for altering news coverage?	V-Dem
3.3.5	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

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

4. Impartial Administration (fair and predictable public administration)

4.1. Indicators of Absence of Corruption

No.	Indicator	Description/question	Data set
4.1.1	Public sector corrupt exchanges (v2excrptps)	ES: How routinely do public sector employees grant favours in exchange for bribes, kickbacks or other material inducements?	V-Dem
4.1.2	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
4.1.3	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
4.1.4	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
4.1.5	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

Notes: ES = expert surveys.

4.2. Indicators of Predictable Enforcement

No.	Indicator	Description/question	Data set
4.2.1	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
4.2.2	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
4.2.3	Rigorous and impartial public administration (v2clrspct)	ES: Are public officials rigorous and impartial in the performance of their duties?	V-Dem
4.2.4	Criteria for appointment decisions in the state administration (v2stcritrecadm)	To what extent are appointment decisions in the state administration based on personal and political connections, as opposed to skills and merit?	V-Dem
4.2.5	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
4.2.6	Bureaucratic quality (L)	ES: Bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services.	ICRG

Notes: ES = expert surveys.

5. Participatory Engagement (instruments for and realization of political involvement)

5.1. Indicators of Civil Society Participation

No.	Indicator	Description/question	Data set
5.1.1	CSO participatory environment (v2csprtcpt)	ES: Are people involved in civil society organizations?	V-Dem
5.1.2	Engaged society (v2dlengage)	ES: When important policy changes are being considered, how wide and how independent are public deliberations?	V-Dem
5.1.3	CSO consultation (v2csnsult)	ES: Are major civil society organizations (CSOs) routinely consulted by policymakers on policies relevant to their members?	V-Dem
5.1.4	Engagement in independent non-political associations (v2canonpol)	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
5.1.5	Engagement in independent political associations (v2capolit)	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
5.1.6	Engagement in independent trade unions (v2catrauni)	What share of the population is regularly active in independent trade unions?	V-Dem

Notes: ES = expert surveys.

5.2. Indicators of Electoral Participation

No.	Indicator	Description/question	Data set
5.2.1	Election VAP turnout (v2elvaptrn)	OD	V-Dem

Notes: OD = observational data.

5.3 Indicators of Direct Democracy

No.	Indicator	Description/question	Data set
5.3.1	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
5.3.2	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

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

5.4. Indicators of Local Democracy

No.	Indicator	Description/question	Data set
5.4.1	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
5.4.2	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

Notes: ES = expert surveys; 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	2019
1.1.2	EMB capacity	V-Dem	v2elembcap	0	0.00%	1975	2019
1.1.3	Election: other voting irregularities	V-Dem	v2elirreg	22	0.32%	1975	2019
1.1.4	Election government intimidation	V-Dem	v2elintim	22	0.32%	1975	2019
1.1.5	Election free and fair	V-Dem	v2elfrfair	22	0.32%	1975	2019
1.1.6	Competition	LIED	competitive elections	0	0.00%	1975	2019
1.2.1	Suffrage	V-Dem	v2elsuffrage	0	0.00%	1975	2019
1.2.2	Election voter registry	V-Dem	V2elrgstry	24	0.35%	1975	2019
1.3.1	Party ban	V-Dem	v2psparban	0	0.00%	1975	2019
1.3.2	Barriers to parties	V-Dem	v2psbars	0	0.00%	1975	2019
1.3.3	Opposition parties' autonomy	V-Dem	v2psoppaut	188	2.74%	1975	2019
1.3.4	Elections multiparty	V-Dem	v2elmulpar	24	0.35%	1975	2019
1.3.5	Competitiveness of participation	Polity	parcomp	411	5.99%	1975	2019
1.3.6	Multiparty elections	LIED	multiparty legislative elections	0	0.00%	1975	2019
1.4.1	Elected officials index	V-Dem	v2x_elecoff	0	0.00%	1975	2019
1.4.2	Competitiveness of executive recruitment	Polity	xrcomp	411	5.99%	1975	2019
1.4.3	Openness of executive recruitment	Polity	xropen	411	5.99%	1975	2019
1.4.4	Electoral	BRRD	Electoral	1	0.01%	1975	2019
2.1.1	Access to justice for men	V-Dem	v2clacjstm	0	0.00%	1975	2019
2.1.2	Access to justice for women	V-Dem	v2clacjstw	0	0.00%	1975	2019
2.1.3	Judicial corruption decision	V-Dem	v2jucorrdc	30	0.44%	1975	2019
2.1.4	Judicial accountability	V-Dem	v2juaccnt	0	0.00%	1975	2019
2.1.5	Fair trial	CLD	fairtrial	0	0.00%	1975	2019
2.2.1	Print/broadcast censorship	V-Dem	v2mecenefm	0	0.00%	1975	2019
2.2.2	Harassment of journalists	V-Dem	v2meharjrn	0	0.00%	1975	2019
2.2.3	Media self-censorship	V-Dem	v2meslfcen	0	0.00%	1975	2019
2.2.4	Freedom of discussion for women	V-Dem	v2cldiscw	0	0.00%	1975	2019

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
2.2.5	Freedom of discussion for men	V-Dem	v2cldiscm	0	0.00%	1975	2019
2.2.6	Freedom of academic and cultural expression	V-Dem	v2clacfree	0	0.00%	1975	2019
2.2.7	Freedom of opinion and expression	CLD	freexp	0	0.00%	1975	2019
2.2.8	Freedom of speech and press	CIRIGHTS	speech	1072	15.63%		
2.2.9	CSO entry and exit	V-Dem	v2cseeorgs	0	0.00%	1975	2019
2.2.10	CSO repression	V-Dem	v2csreprss	0	0.00%	1975	2019
2.2.11	Freedom of peaceful assembly	V-Dem	v2caassemb	1603	22.38%		
2.2.12	Freedom of association and assembly	CLD	freass	0	0.00%	1975	2019
2.2.13	Freedom of assembly and association	CIRIGHTS	assn	1075	15.68%		
2.2.14	Workers' rights	CIRIGHTS	worker	1074	15.66%		
2.2.15	Freedom of religion	V-Dem	v2clrelig	0	0.00%	1975	2019
2.2.16	Religious organization repression	V-Dem	v2csrlgrep	0	0.00%	1975	2019
2.2.17	Freedom of thought, conscience and religion	CLD	frerel	0	0.00%	1975	2019
2.2.18	Freedom of religion	CIRIGHTS	rel_free	990	14.44%		
2.2.19	Freedom of foreign movement	V-Dem	v2clfmove	0	0.00%	1975	2019
2.2.29	Freedom of domestic movement for women	V-Dem	v2cldmovew	0	0.00%	1975	2019
2.2.21	Freedom of domestic movement for men	V-Dem	v2cldmovem	0	0.00%	1975	2019
2.2.22	Freedom of movement and residence	CLD	fremov	0	0.00%	1975	2019
2.2.23	Freedom of foreign movement	CIRIGHTS	formov	988	14.41%		
2.2.24	Freedom of domestic movement	CIRIGHTS	fremov	989	14.42%		
2.2.25	Freedom from forced labour for women	V-Dem	v2clslavef	0	0.00%	1975	2019
2.2.26	Freedom from forced labour for men	V-Dem	v2clslavem	0	0.00%	1975	2019
2.2.27	Freedom from torture	V-Dem	v2cltort	0	0.00%	1975	2019
2.2.28	Freedom from political killings	V-Dem	v2clkill	0	0.00%	1975	2019

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
2.2.29	Political terror scale	PTS	PTSsd	259	3.78%	1975	2019
2.2.30	Internal conflict	ICRG	D	2232	32.55%	1984	2019
2.2.31	Physical integrity rights index	CIRIGHTS	physint	1097	16.00%		
2.3.1	Social class equality in respect for civil liberties	V-Dem	v2clacjust	0	0.00%	1975	2019
2.3.2	Social group equality in respect for civil liberties	V-Dem	v2clsocgrp	0	0.00%	1975	2019
2.3.3	Power distributed by socio-economic position	V-Dem	v2pepwrses	0	0.00%	1975	2019
2.3.4	Power distributed by social group	V-Dem	v2pepwrsoc	0	0.00%	1975	2019
2.3.5	Representation of disadvantaged social groups	V-Dem	v2lgdsadlo	535	7.80%	1975	2019
2.3.6	Exclusion by socio-economic group index	V-Dem	v2xpe_exlecon	54	0.79%		
2.3.7	Exclusion by political group index	V-Dem	v2xpe_exlpol	125	1.82%		
2.3.8	Exclusion by social group index	V-Dem	v2xpe_exlsocgr	70	1.02%		
2.3.9	Exclusion by urban-rural location index	V-Dem	v2xpe_exlgeo	71	1.04%		
2.3.10	Religious/ethnic tensions	ICRG	---	2232	32.45%	1984	2019
2.3.11	Infant mortality rate	UN statistics	---	73	1.06%	1975	2019
2.3.12	Life expectancy	UN statistics	---	73	1.06%	1975	2019
2.3.13	Kilocalories per person per day	FAO	---	546	7.96%	1975	2019
2.3.14	Literacy	UNESCO	---	1186	17.30%	1975	2019
2.3.15	Mean years of schooling	GHDx	---	28	0.41%	1975	2019
2.3.16	Educational equality	V-Dem	v2peedueq	0	0.00%	1975	2019
2.3.17	Health equality	V-Dem	v2pehealth	0	0.00%	1975	2019
2.3.18	Power distributed by gender	V-Dem	v2pepwrgen	0	0.00%	1975	2019
2.3.19	CSO women's participation	V-Dem	v2csgender	0	0.00%	1975	2019
2.3.20	Female vs. male mean years of schooling	GHDx	—	27	0.42%	1975	2019
2.3.21	Lower chamber female legislators	V-Dem	v2lgfemleg	310	5.02%	1975	2019
2.3.22	Exclusion by gender index	V-Dem	v2elwomcab	55	0.80%	1987	2019

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
2.3.23	Women's political rights	CIRIGHTS	wopol	1088	15.87%		
2.3.24	Women's ethnic rights	CIRIGHTS	wecon	1137	16.58%		
3.1.1	Legislature questions officials in practice	V-Dem	v2lgqstexp	112	1.63%	1975	2019
3.1.2	Executive oversight	V-Dem	v2lgotovst	110	1.60%	1975	2019
3.1.3	Legislature investigates in practice	V-Dem	v2lginvstp	112	1.63%	1975	2019
3.1.4	Legislature opposition parties	V-Dem	v2lgoppart	110	1.60%	1975	2019
3.1.5	Executive constraints	Polity	xconst	411	5.99%	1975	2019
3.2.1	High Court independence	V-Dem	v2juhcind	27	0.39%	1975	2019
3.2.2	Lower court independence	V-Dem	v2juncind	0	0.00%	1975	2019
3.2.3	Compliance with High Court	V-Dem	v2juhccomp	30	0.44%	1975	2019
3.2.4	Compliance with judiciary	V-Dem	v2jucomp	30	0.44%	1975	2019
3.2.5	Law and order	ICRG	---	2232	32.55%	1975	2019
3.2.6	Independent judiciary	CIRIGHTS	injud	1011	14.74%		
3.3.1	Print/broadcast media critical	V-Dem	v2mecrit	0	0.00%	1975	2019
3.3.2	Print/broadcast media perspectives	V-Dem	v2merange	0	0.00%	1975	2019
3.3.3	Media bias	V-Dem	v2mebias	0	0.00%	1975	2019
3.3.4	Media corrupt	V-Dem	v2mecorrpt	0	0.00%	1975	2019
3.3.5	Media freedom	MFD	---	0	0.00%	1975	2019
4.1.1	Public sector corrupt exchanges	V-Dem	v2excrptps	0	0.00%	1975	2019
4.1.2	Public sector theft	V-Dem	v2exthftps	0	0.00%	1975	2019
4.1.3	Executive embezzlement and theft	V-Dem	v2exembez	0	0.00%	1975	2019
4.1.4	Executive bribery and corrupt exchanges	V-Dem	v2exbribe	0	0.00%	1975	2019
4.1.5	Corruption	ICRG	F	2232	32.55%	1984	2019
4.2.1	Executive respects constitution	V-Dem	v2exrescon	0	0.00%	1975	2019
4.2.2	Transparent laws with predictable enforcement	V-Dem	v2cltrnslw	0	0.00%	1975	2019
4.2.3	Rigorous and impartial public administration	V-Dem	v2clrspct	0	0.00%	1975	2019
4.2.4	Criteria for appointment decisions in the state administration	V-Dem	v2stcritrecadm	289	4.21%		

ID	Indicator	Data set	Variable	Missing (N)	Missing (%)	Year (min)	Year (max)
4.2.5	Criteria for appointment decisions in the armed forces	V-Dem	v2stcritapparm	300	4.38%		
4.2.6	Bureaucratic quality	ICRG	L	2232	32.55%	1984	2019
5.1.1	CSO participatory environment	V-Dem	v2csprtcpt	0	0.00%	1975	2019
5.1.2	Engaged society	V-Dem	v2dlengage	0	0.00%	1975	2019
5.1.3	CSO consultation	V-Dem	V2csnsult	0	0.00%	1975	2019
5.1.4	Engagement in independent non-political associations	V-Dem	v2canonpol	1879	27.40%		
5.1.5	Engagement in independent political associations	V-Dem	v2capolit	1914	27.91%		
5.1.6	Engagement in independent trade unions	V-Dem	v2catrauni	1893	27.61%		
5.2.1	Election: VAP turnout	V-Dem/ IDEA	v2elvaptrn	825	12.03%	1975	2019
5.3.1	Direct popular vote index	V-Dem	v2xdd_dd	50	0.73%	1975	2019
5.3.2	Electoral	BRRD	Electoral	1	0.01%	1975	2019
5.4.1	Local government index	V-Dem	v2xel_locelec	88	1.28%	1975	2019
5.4.2	Subnational elections free and fair	V-Dem	v2elffelr	31	0.45%	1975	2019

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: Representative Government

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.1	Clean Elections	-0.938	0.000	0.122	0.000	.885
1.3	Free Political Parties	-0.928	0.000	0.139	0.000	.922
1.4	Elected Officials	-0.916	0.000	0.161	0.000	.911
						Cronbach's alpha = .936

1.1. Clean Elections

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.1.1	EMB autonomy	-0.943	0.000	0.113	0.000	.933
1.1.2	EMB capacity	-0.853	0.000	0.273	0.000	.944
1.1.3	Election other voting irregularities	-0.888	0.000	0.213	0.000	.941
1.1.4	Election government intimidation	-0.962	0.000	0.075	0.000	.934
1.1.5	Election free and fair	-0.982	0.000	0.038	0.000	.931
1.1.6	Competition	-0.817	0.000	0.333	0.000	.969
						Cronbach's alpha = .951

1.3. Free Political Parties

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.3.1	Party ban	-0.833	0.000	0.307	0.000	.846
1.3.2	Barriers to parties	-0.928	0.000	0.140	0.000	.830
1.3.3	Opposition parties' autonomy	-0.926	0.000	0.140	0.000	.835
1.3.4	Elections multiparty	-0.888	0.000	0.214	0.000	.844
1.3.5	Competitiveness of participation	-0.873	0.000	0.240	0.000	.888
1.3.6	Multiparty elections	-0.768	0.000	0.411	0.000	.914
						Cronbach's alpha = .886

1.4. Elected Government

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.4.1	Elected officials index	-0.734	0.000	0.463	0.000	.710
1.4.2	Competitiveness of executive recruitment	-0.823	0.000	0.324	0.000	.678
1.4.3	Openness of executive recruitment	-0.611	0.000	0.627	0.000	.750
1.4.4	Electoral	-0.936	0.000	0.125	0.000	.774
						Cronbach's alpha = .775

Attribute 2: Fundamental Rights

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.1	Access to Justice	-0.958	0.000	0.083	0.000	.868
2.2	Civil Liberties	-0.896	0.000	0.197	0.000	.904
2.3	Social Rights	-0.863	0.000	0.257	0.000	.920
						Cronbach's alpha = .929

2.1. Access to Justice

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.1.1	Access to justice for men	-0.980	0.000	0.039	0.000	.881
2.1.2	Access to justice for women	-0.966	0.000	0.067	0.000	.886
2.1.3	Judicial corruption decision	-0.682	0.000	0.535	0.000	.914
2.1.4	Judicial accountability	-0.643	0.000	0.587	0.000	.919
2.1.5	Fair trial	-0.859	0.000	0.262	0.000	.898
						Cronbach's alpha = .919

2.2. Civil Liberties

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.A	Freedom of expression	-0.979	0.000	0.041	0.000	.946
2.2.B	Freedom of association and assembly	-0.966	0.000	0.069	0.000	.949
2.2.C	Freedom of religion	-0.855	0.000	0.269	0.000	.964
2.2.D	Freedom of movement	-0.911	0.000	0.171	0.000	.953
2.2.E	Personal integrity and security	-0.878	0.000	0.231	0.000	.962
						Cronbach's alpha = .964

2.2.A. Freedom of expression

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.1	Print/ broadcast censorship effort	-0.935	0.000	0.127	0.000	.932
2.2.2	Harassment of journalists	-0.930	0.000	0.137	0.000	.933
2.2.3	Media self-censorship	-0.907	0.000	0.177	0.000	.934
2.2.4	Freedom of discussion for women	-0.954	0.000	0.090	0.000	.932
2.2.5	Freedom of discussion for men	-0.959	0.000	0.080	0.000	.931
2.2.6	Freedom of academic and cultural expression	-0.936	0.000	0.126	0.000	.933
2.2.7	Freedom of opinion and expression	-0.865	0.000	0.253	0.000	.959
2.2.8	Freedom of speech and press	-0.693	0.000	0.519	0.000	.960
						Cronbach's alpha = .948

2.2.B. Freedom of association and assembly

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.9	CSO entry and exit	0.925	0.000	0.143	0.000	.744
2.2.10	CSO repression	0.934	0.000	0.128	0.000	.736
2.2.11	Freedom of peaceful assembly	0.909	0.000	0.173	0.000	.760
2.2.12	Freedom of association and assembly	0.897	0.000	0.195	0.000	.839
2.2.13	Freedom of assembly and association	0.799	0.000	0.361	0.000	.852
2.2.14	Workers' rights	0.613	0.000	0.624	0.000	.859
						Cronbach's alpha = .840

2.2.C. Freedom of religion

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.15	Freedom of religion	-0.873	0.000	0.239	0.000	.411
2.2.16	Religious organization repression	-0.868	0.000	0.247	0.000	.415
2.2.17	Freedom of thought, conscience, and religion	-0.836	0.000	0.302	0.000	.741
2.2.18	Freedom of religion	-0.753	0.000	0.434	0.000	.741
						Cronbach's alpha = .719

2.2.D. Freedom of movement

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.19	Freedom of foreign movement	-0.907	0.000	0.179	0.000	.702
2.2.20	Freedom of domestic movement for women	-0.867	0.000	0.249	0.000	.706
2.2.21	Freedom of domestic movement for men	-0.869	0.000	0.245	0.000	.703
2.2.22	Freedom of movement and residence	-0.803	0.000	0.355	0.000	.819
2.2.23	Freedom of foreign movement	-0.684	0.000	0.535	0.000	.826
2.2.24	Freedom of domestic movement	-0.601	0.000	0.639	0.000	.828
						Cronbach's alpha = .813

2.2.E. Personal integrity and security

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.25	Freedom from forced labor for women	-0.690	0.000	0.525	0.000	.850
2.2.26	Freedom from forced labor for men	-0.666	0.000	0.558	0.000	.848
2.2.27	Freedom from torture	-0.935	0.000	0.128	0.000	.834
2.2.28	Freedom from political killings	-0.941	0.000	0.116	0.000	.836
2.2.29	Political Terror Scale	-0.790	0.000	0.378	0.000	.889
2.2.30	Internal conflict	-0.641	0.000	0.589	0.000	.878
2.2.31	Physical integrity rights index	-0.786	0.000	0.383	0.000	.875
						Cronbach's alpha = .880

2.3. Social Rights and Equality

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.A	Social group equality	-0.940	0.000	0.117	0.000	.828
2.3.B	Basic welfare	-0.785	0.000	0.383	0.000	.918
2.3.C	Gender equality	-0.904	0.000	0.183	0.000	.847
						Cronbach's alpha = .905

2.3.A. Social group equality

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.1	Social class equality in respect for civil liberties	0.865	0.000	0.254	0.000	.932
2.3.2	Social group equality in respect for civil liberties	0.798	0.000	0.365	0.000	.936
2.3.3	Power distributed by socioeconomic position	0.728	0.000	0.472	0.000	.938
2.3.4	Power distributed by social group	0.816	0.000	0.336	0.000	.935
2.3.5	Representation of disadvantaged social groups	0.479	0.000	0.771	0.000	.946
2.3.6	Exclusion by socio-economic group index	0.924	0.000	0.148	0.000	.929
2.3.7	Exclusion by political group index	0.844	0.000	0.290	0.000	.935
2.3.8	Exclusion by social group index	0.969	0.000	0.063	0.000	.928
2.3.9	Exclusion by urban-rural location index	0.876	0.000	0.773	0.000	.933
2.3.10	Religious/ethnic tensions	0.477	0.000	0.773	0.000	.947
						Cronbach's alpha = .942

2.3.B. Basic welfare

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.11	Infant mortality rate	-0.982	0.000	0.036	0.000	.933
2.3.12	Life expectancy	-0.941	0.000	0.116	0.000	.937
2.3.13	Kilocalories per person per day	-0.740	0.000	0.454	0.000	.946
2.3.14	Literacy	-0.818	0.000	0.331	0.000	.950
2.3.15	Average years of schooling	-0.852	0.000	0.276	0.000	.938
2.3.16	Educational equality	-0.651	0.000	0.576	0.000	.945
2.3.17	Health equality	-0.720	0.000	0.483	0.000	.942
						Cronbach's alpha = .949

2.3.C. Gender equality

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.18	Power distributed by gender	-0.849	0.000	0.281	0.000	.778
2.3.19	CSO women's participation	-0.789	0.000	0.380	0.000	.786
2.3.20	Female vs. male mean years of schooling	-0.689	0.000	0.525	0.000	.807
2.3.21	Women's representation in national parliaments	-0.558	0.000	0.690	0.000	.833
2.3.22	Exclusion by gender index	-0.918	0.000	0.158	0.000	.765
2.3.23	Women's political rights	-0.551	0.000	0.697	0.000	.851
2.3.24	Women's economic rights	-0.590	0.000	0.652	0.000	.850
						Cronbach's alpha = .838

Attribute 3: Checks on Government

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.1	Effective parliament	0.886	0.000	0.215	0.000	.852
3.2	Judicial independence	0.847	0.000	0.282	0.000	.889
3.3	Media integrity	0.904	0.000	0.183	0.000	.851
						Cronbach's alpha = .907

3.1. Effective Parliament

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.1.1	Legislature questions officials in practice	-0.899	0.000	0.194	0.000	.925
3.1.2	Executive oversight	-0.935	0.000	0.127	0.000	.919
3.1.3	Legislature investigates in practice	-0.962	0.000	0.076	0.000	.914
3.1.4	Legislature opposition parties	-0.939	0.000	0.119	0.000	.918
3.1.5	Executive constraints	-0.846	0.000	0.284	0.000	.965
						Cronbach's alpha = .945

3.2. Judicial Independence

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.2.1	High court independence	-0.934	0.000	0.127	0.000	.847
3.2.2	Lower court independence	-0.932	0.000	0.132	0.000	.848
3.2.3	Compliance with high court	-0.895	0.000	0.199	0.000	.850
3.2.4	Compliance with judiciary	-0.923	0.000	0.148	0.000	.844
3.2.5	Law and order	-0.474	0.000	0.776	0.000	.912
3.2.6	Independent judiciary	-0.719	0.000	0.483	0.000	.920
						Cronbach's alpha = .897

3.3. Media Integrity

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.3.1	Print/broadcast media critical	-0.962	0.000	0.075	0.000	.925
3.3.2	Print/broadcast media perspectives	-0.955	0.000	0.090	0.000	.928
3.3.3	Media bias	-0.953	0.000	0.091	0.000	.926
3.3.4	Media corrupt	-0.891	0.000	0.207	0.000	.935
3.3.5	Media Freedom	-0.753	0.000	0.434	0.000	.968
						Cronbach's alpha = .950

Attribute 4: Impartial Administration

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
4.1	Absence of Corruption	0.941	0.001	0.111	0.003	---
4.2	Predictable Enforcement	0.922	0.001	0.148	0.003	---
						Cronbach's alpha = .928

4.1. Absence of Corruption

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
4.1.1	Public sector corrupt exchanges	-0.959	0.000	0.059	0.000	.899
4.1.2	Public sector theft	-0.963	0.000	0.074	0.000	.899
4.1.3	Executive embezzlement and theft	-0.919	0.000	0.157	0.000	.902
4.1.4	Executive bribery and corrupt exchanges	-0.889	0.000	0.211	0.000	.909
4.1.5	Corruption	-0.722	0.000	0.480	0.000	.960
						Cronbach's alpha = .935

4.2. Predictable Enforcement

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
4.2.1	Executive respects constitution	-0.876	0.000	0.233	0.000	.894
4.2.2	Transparent laws with predictable enforcement	-0.903	0.000	0.185	0.000	.890
4.2.3	Rigorous and impartial public administration	-0.916	0.000	0.162	0.000	.891
4.2.4	Criteria for appointment decisions in the state administration	-0.804	0.000	0.353	0.000	.901
4.2.5	Criteria for appointment decisions in the armed forces	-0.812	0.000	0.341	0.000	.899
4.2.6	Bureaucratic quality	-0.762	0.000	0.419	0.000	.931
						Cronbach's alpha = .918

Attribute 5: Participatory Engagement

5.1. Civil Society Participation

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
5.1.1	CSO participatory environment	-0.869	0.000	0.245	0.000	.865
5.1.2	Engaged society	-0.852	0.000	0.275	0.000	.872
5.1.3	CSO consultation	-0.884	0.000	0.218	0.000	.869
5.1.4	Engagement in independent non-political associations	-0.592	0.000	0.650	0.000	.896
5.1.5	Engagement in independent political associations	-0.670	0.000	0.551	0.000	.886
5.1.6	Engagement in independent trade unions	-0.629	0.000	0.605	0.000	.892
						Cronbach's alpha = .898

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).

Dimension 1. Representative Government

No.	Component	1.1	1.2	1.3	1.4
1.1	Clean elections		.759**	.870**	.858**
1.2	Inclusive suffrage	6833		.590**	.708**
1.3	Free political parties	6835	6833		.849**
1.4	Elected officials	6835	6833	6857	

1.1. Clean Elections

No.	Component	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6
1.1.1	EMB autonomy		.809**	.810**	.893**	.928**	.831**
1.1.2	EMB capacity	6857		.849**	.834**	.818**	.640**
1.1.3	Election other voting irregularities	6835	6835		.870**	.864**	.675**
1.1.4	Election government intimidation	6835	6835	6835		.946**	.762**
1.1.5	Election free and fair	6835	6835	6835	6835		.808**
1.1.6	Competition	6857	6857	6835	6835	6835	

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
1.3.1	Party ban		.785**	.761**	.739*	.725**	.701**
1.3.2	Barriers to parties	6857		.873**	.810**	.811**	.695**
1.3.3	Opposition parties autonomy	6669	6669		.800**	.819**	.666**
1.3.4	Elections multiparty	6833	6833	6645		.787**	.751**
1.3.5	Competitiveness of participation	6446	6446	6258	6422		.701**
1.3.6	Multiparty elections	6857	6857	6669	6833	6446	

1.4. Elected Government

No.	Component	1.4.1	1.4.2	1.4.3	1.4.4
1.4.1	Elected officials index		.542**	.526**	.685**
1.4.2	Competitiveness of executive recruitment	6446		.551**	.776**
1.4.3	Openness of executive recruitment	6446	6446		.538**
1.4.4	Electoral	6856	6445	6445	

Dimension 2. Fundamental Rights

No.	Component	2.1	2.2	2.3
2.1	Access to justice		.858**	.826**
2.2	Civil liberties	6827		.774**
2.3	Social rights	6827	6857	

2.1. Access to Justice

No.	Component	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5
2.1.1	Access to justice for men		.950**	.657**	.622**	.836**
2.1.2	Access to justice for women	6857		.631**	.603**	.824**
2.1.3	Judicial corruption decision	6827	6827		.671**	.717**
2.1.4	Judicial accountability	6857	6857	6827		.606**
2.1.5	Fair trial	6857	6857	6827	6857	

2.2. Civil Liberties

No.	Component	2.2.A	2.2.B	2.2.C	2.2.D	2.2.E
2.2.A	Freedom of expression		.948**	.822**	.875**	.872**
2.2.B	Freedom of association and assembly	6857		.845**	.874**	.820**
2.2.C	Freedom of religion	6857	6857		.833**	.718**
2.2.D	Freedom of movement	6857	6857	6857		.827**
2.2.E	Personal integrity and security	6857	6857	6857	6857	

2.2.A. Freedom of expression

No.	Component	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5	2.2.6	2.2.7	2.2.8
2.2.1	Print/ broadcast censorship effort		.888**	.890**	.876**	.879**	.875**	.841**	.664**
2.2.2	Harassment of journalists	6857		.857**	.875**	.882**	.858**	.837**	.655**
2.2.3	Media self-censorship	6857	6857		.837**	.852**	.847**	.806**	.631**
2.2.4	Freedom of discussion for women	6857	6857	6857		.958**	.889**	.803**	.629**
2.2.5	Freedom of discussion for men	6857	6857	6857	6857		.899**	.812**	.638**
2.2.6	Freedom of academic and cultural expression	6857	6857	6857	6857	6857		.802**	.658**
2.2.7	Freedom of opinion and expression	6857	6857	6857	6857	6857	6857		.710**
2.2.8	Freedom of speech and press	5785	5785	5785	5785	5785	5785	5785;	

2.2.B. Freedom of association and assembly

No.	Component	2.2.9	2.2.10	2.2.11	2.2.12	2.2.13	2.2.14
2.2.9	CSO entry and exit		.896**	.827**	.830**	.714**	.536**
2.2.10	CSO repression	6857		.862**	.811**	.685**	.559**
2.2.11	Freedom of peaceful assembly	5254	5254		.815**	.729**	.559**
2.2.12	Freedom of association and assembly	6857	6857	5254		.812**	.595**
2.2.13	Freedom of assembly and association	5782	5782	4495	5782		.553**
2.2.14	Workers' rights	5783	5783	4496	5783	5778	

2.2.C. Freedom of religion

No.	Component	2.2.15	2.2.16	2.2.17	2.2.18
2.2.15	Freedom of religion		.786**	.694**	.614**
2.2.16	Religious organization repression	6857		.682**	.617**
2.2.17	Freedom of thought, conscience and religion	6857	6857		.730**
2.2.18	Freedom of religion	5867	5867	5867	

2.2.D. Freedom of movement

No.	Component	2.2.19	2.2.20	2.2.21	2.2.22	2.2.23	2.2.24
2.2.19	Freedom of foreign movement		.788**	.804**	.729**	.614**	.515**
2.2.20	Freedom of domestic movement for women	6857		.805**	.673**	.560**	.459**
2.2.21	Freedom of domestic movement for men	6857	6857		.667**	.522**	.478**
2.2.22	Freedom of movement and residence	6857	6857	6857		.666**	.636**
2.2.23	Freedom of foreign movement	5869	5869	5869	5869		.537**
2.2.24	Freedom of domestic movement	5868	5868	5868	5868	5868	

2.2.E. Personal integrity and security

No.	Component	2.2.25	2.2.26	2.2.27	2.2.28	2.2.29	2.2.30	2.2.31
2.2.25	Freedom from forced labor for women		.872**	.630**	.598**	.443**	.395**	.464**
2.2.26	Freedom from forced labor for men	6857		.644**	.617**	.454**	.374**	.464**
2.2.27	Freedom from torture	6857	6857		.904**	.625**	.557**	.666**
2.2.28	Freedom from political killings	6857	6857	6857		.656**	.593**	.683**
2.2.29	Political Terror Scale	6598	6598	6598	6598		.611**	.833**
2.2.30	Internal conflict	4625	4625	4625	4625	4603		.574**
2.2.31	Physical integrity rights index	5760	5760	5760	5760	5735	4518	

2.3. Social rights

No.	Component	2.3.A	2.3.B	2.3.C
2.3.A	Social group equality		.738**	.849**
2.3.B	Basic welfare	6857		.710**
2.3.C	Gender equality	6857	6857	

2.3.A. Social group equality

No.	Component	2.3.1	2.3.2	2.3.3	2.3.4	2.3.5	2.3.6	2.3.7	2.3.8	2.3.9	2.3.10
2.3.1	Social class equality in respect for civil liberties		.754**	.702**	.704**	.529**	.816**	.650**	.783**	.706**	.347**
2.3.2	Social group equality in respect for civil liberties	6857		.558**	.714**	.456**	.656**	.631**	.797**	.585**	.359**
2.3.3	Power distributed by socio economic position	6857	6857		.611**	.587**	.713**	.518**	.644**	.578**	.281**
2.3.4	Power distributed by social group	6857	6857	6857		.415**	.678**	.699**	.821**	.626**	.397**
2.3.5	Representation of disadvantaged social groups	6322	6322	6322	6322		.516**	.411**	.472**	.462**	.125**
2.3.6	Exclusion by socio-economic group index	6803	6803	6803	6803	6268		.760**	.884**	.913**	.435**
2.3.7	Exclusion by political group index	6732	6732	6732	6732	6205	6732		.843**	.795**	.421**
2.3.8	Exclusion by social group index	6787	6787	6787	6787	6252	6787	6732		.850**	.486**
2.3.9	Exclusion by urban-rural location index	6786	6786	6786	6786	6251	6786	6732	6786		.457**
2.3.10	Religious/ethnic tensions	4625	4625	4625	4625	4434	4588	4540	4581	4581	

2.3.B. Basic welfare

No.	Component	2.3.11	2.3.12	2.3.13	2.3.14	2.3.15	2.3.16	2.3.17
2.3.11	Infant mortality rate		.954**	.785**	.765**	.865**	.727**	.775**
2.3.12	Life expectancy	6784		.773**	.722**	.816**	.670**	.732**
2.3.13	Kilocalories per person per day	6266	6266		.555**	.688**	.621**	.673**
2.3.14	Literacy	5671	5671	5206		.909**	.617**	.623**
2.3.15	Average years of schooling	6784	6784	6311	5671		.682**	.689**
2.3.16	Educational equality	6784	6784	6311	5671	6829		.899**
2.3.17	Health equality	6784	6784	6311	5671	6829	6857	

2.3.C. Gender equality

No.	Component	2.3.18	2.3.19	2.3.20	2.3.21	2.3.22	2.3.23	2.3.24
2.3.18	Power distributed by gender		.691**	.515**	.504**	.797**	.511**	.479**
2.3.19	CSO women's participation	857		.577**	.412**	.728**	.448**	.434**
2.3.20	Female vs. male mean years of schooling	6829	6829		.346**	.674**	.352**	.461**
2.3.21	Women's representation in national parliaments	6241	6241	6219		.458**	.674**	.285**
2.3.22	Exclusion by gender index	6802	6802	6790	6186		.490**	.561**
2.3.23	Women's political rights	5769	5769	5758	5434	5730		.343**
2.3.24	Women's ethnic rights	5720	5720	5709	5390	5681	5702	

Dimension 3. Checks on government

No.	Component	3.1	3.2	3.3
3.1	Effective parliament		.751**	.801**
3.2	Judicial independence	6829		.765**
3.3	Media integrity	6829	6857	

3.1. Effective parliament

No.	Component	3.1.1	3.1.2	3.1.3	3.1.4	3.1.5
3.1.1	Legislature questions officials in practice		.844**	.863**	.844**	.769**
3.1.2	Executive oversight	6745		.907**	.870**	.779**
3.1.3	Legislature investigates in practice	6745	6745		.904**	.793**
3.1.4	Legislature opposition parties	6745	6745	6745		.831**
3.1.5	Executive constraints	6362	6364	6362	6364	

3.2. Judicial independence

No.	Component	3.2.1	3.2.2	3.2.3	3.2.4	3.2.5	3.2.6
3.2.1	High court independence		.905**	.774**	.811**	.408**	.632**
3.2.2	Lower court independence	6830		.779**	.801**	.391**	.632**
3.2.3	Compliance with high court	6827	6827		.885**	.474**	.650**
3.2.4	Compliance with judiciary	6827	6827	6827		.486**	.671**
3.2.5	Law and order	4607	4625	4604	4604		.434**
3.2.6	Independent judiciary	5825	5846	5822	5822	4533	

3.3. Media integrity

No.	Component	3.3.1	3.3.2	3.3.3	3.3.4	3.3.5
3.3.1	Print/broadcast media critical		.922**	.911**	.857**	.725**
3.3.2	Print/broadcast media perspectives	6857		.915**	.832**	.692**
3.3.3	Media bias	6857	6857		.853**	.712**
3.3.4	Media corrupt	6857	6857	6857		.747**
3.3.5	Media Freedom	6857	6857	6857	6857	

Dimension 4. Impartial administration

No.	Component	4.1	4.2
4.1	Absence of corruption		.866**
4.2	Predictable enforcement	6857	

4.1. Absence of corruption

No.	Component	4.1.1	4.1.2	4.1.3	4.1.4	4.1.5
4.1.1	Public sector corrupt exchanges		.919**	.856**	.835**	.681**
4.1.2	Public sector theft	6857		.864**	.819**	.690**
4.1.3	Executive embezzlement and theft	6857	6857		.859**	.672**
4.1.4	Executive bribery and corrupt exchanges	6857	6857	6857		.669**
4.1.5	Corruption	4625	4625	4625	4625	

4.2. Predictable enforcement

No.	Component	4.2.1	4.2.2	4.2.3	4.2.4	4.2.5	4.2.6
4.2.1	Executive respects constitution		.788**	.791**	.657**	.697**	.649**
4.2.2	Transparent laws with predictable enforcement	6857		.855**	.676**	.683**	.669**
4.2.3	Rigorous and impartial public administration	6857	6857		.665**	.666**	.684**
4.2.4	Criteria for appointment decisions in the state administration	6568	6568	6568		.788**	.671**
4.2.5	Criteria for appointment decisions in the armed forces	6557	6557	6557	6552		.629**
4.2.6	Bureaucratic quality	4625	4625	4625	4444	4438	

5.1. Civil society participation

No.	Component	5.1.1	5.1.2	5.1.3	5.1.4	5.1.5	5.1.6
5.1.1	CSO participatory environment		.750**	.800**	.568**	.582**	.548**
5.1.2	Engaged society	6857		.811**	.442**	.566**	.489**
5.1.3	CSO consultation	6857	6857		.484**	.524**	.496**
5.1.4	Engagement in independent non-political associations	4978	4978	4978		.559**	.562**
5.1.5	Engagement in independent political associations	4943	4943	4943	4943		.639**
5.1.6	Engagement in independent trade unions	4964	4964	4964	4874	4839	

5.3. Direct democracy

No.	Component	5.3.1	5.3.2	5.3
5.3.1	Direct popular vote index		.304**	.963**
5.3.2	Electoral	6806		.388**
5.3	Direct democracy sub-dimension	6806	6806	

5.4. Local democracy

No.	Component	5.4.1	5.4.2	5.4
5.4.1	Local government index		.642**	.930**
5.4.2	Subnational elections free and fair	6761		.820**
5.4	Local democracy sub-dimension	6761	6761	

Annex G. Comparisons with extant measures

Table G.1. Selected characteristics of 10 large-scale data sets

Data set	Years covered	Types of sources				Based on various data sets	Uncertainty estimates	Scale
		IC	OD	ES	PS			
International IDEA: GSOD Indices	1975–2019	X	X	X		Yes	Yes	Interval
Bertelsmann Stiftung: Bertelsmann Transformation Index (BTI)	2003–2019 (biennial)			X		No	No	Ordinal
Cingranelli and Richards (CIRIGHTS): Human Rights Data Project	1981–2017	X				No	No	Ordinal
Electoral Integrity Project (EIP): Perceptions of Electoral Integrity (PEI)	2012–2018			X		No	Yes	Interval
Economist Intelligence Unit (EIU): Democracy Index	2006, 2008, 2010–2019			X	X	Yes	No	Interval
Freedom House (FH): Freedom in the World	1972–2019			X		No	No	Ordinal
Marshall and Gurr: Polity V	1800–2017	X				No	No	Ordinal
V-Dem Project: V-Dem data set	1900-2019	X	X	X		No	Yes	Interval
Kaufmann and Kray: Worldwide Governance Indicators (WGI)	1996, 1998, 2000–2018	X	X	X	X	Yes	Yes	Interval
World Justice Project (WJP): Rule of Law Index	2012–2019			X	X	No	No	Interval

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

Correlations between GSoD Indices and extant measures

The covariation between GSoD Indices and existing measures constructed to measure relatively similar concepts are set out below. The correlation coefficients (Pearson's r) indicate the general level of agreement (covariation) between them. As a rule-of-thumb, in a country–year setting such as this, with this kind of data, correlation coefficients above .80 indicate very high levels of agreement, coefficients above .60 signify high levels of agreement, correlations above .40 denote moderate levels of agreement, while correlations below .40 show low levels of agreement.

Table G.2. Correlations between GSoD Indices and extant measures

Attribute 1. Representative Government

Correlation with:	Correlation coefficient	N	% of GSODI N
Voice and accountability (WGI)	.903	3216	47.07%
Political rights (FH)	-.901	6661	97.48%
Democracy (Democracy - Dictatorship)	.826	5029	73.60%
Democracy index (EIU)	.883	1896	27.75%
Political participation (BTI)	.898	1009	14.77%
Polity2 (Polity)	.895	6463	94.59%
Polyarchy index (V-Dem)	.955	6833	100%

Subattribute 1.1: Clean elections

Correlation with:	Correlation coefficient	N	% of GSODI N
Perceptions of electoral integrity (EIP)	.887	281	4.11%
Electoral self-determination (CIRI)	.765	5772	84.45%
Free and fair elections (BTI)	.858	1009	14.76%

Subattribute 1.3: Free political parties

Correlation with:	Correlation coefficient	N	% of GSODI N
Opposition (Political Institutions and Political Events - PIPE)	.820	4993	72.81%

Subattribute 1.4: Elected government

Correlation with:	Correlation coefficient	N	% of GSODI N
Executive elections (LIED)	.682	6822	99.49%
Legislative elections (LIED)	.643	6822	99.49%
Effective power to govern (BTI)	.781	1009	14.71%

Attribute 2: Fundamental rights

Correlation with:	Correlation coefficient	N	% of GSODI N
Civil liberties (FH)	-.881	6655	97.05%
Civil rights (BTI)	.872	1009	14.71%
Egalitarian component index (V-Dem)	.931	6808	99.29%

Subattribute 2.1: Access to justice

Correlation with:	Correlation coefficient	N	% of GSODI N
Due process of law and rights of the accused (WJP)	.799	535	7.84%
Civil justice (WJP)	.806	535	7.84%

Subattribute 2.2: Civil liberties

Correlation with:	Correlation coefficient	N	% of GSODI N
Civil liberties (FH)	-.903	5344	82.37%
Civil liberties (EIU)	.879	1510	23.27%

Sub-component 2.2.A: Freedom of expression

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of opinion and expression is effectively guaranteed (WJP)	.894	535	7.84%
Freedom of speech (CIRI)	.695	5785	84.37%
Freedom of expression (BTI)	.886	1009	14.78%

Sub-component 2.2.B: Freedom of association and assembly

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of assembly and association is effectively guaranteed (WJP)	.886	535	7.84%
Freedom of assembly and association (CIRI)	.796	5782	84.32%
Freedom of assembly and association (BTI)	.882	1009	14.78%

Sub-component 2.2.C: Freedom of religion

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of belief and religion is effectively guaranteed (WJP)	.797	535	7.84%
Freedom of religion (CIRI)	.764	5867	85.56%
Religious discrimination (Religion and State Project - RAS)	-.708	3923	57.21%
Religious regulation (Religion and State Project - RAS)	-.722	3924	57.23%

Sub-component 2.2.D: Freedom of movement

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of domestic movement (CIRI)	.608	5868	85.58%
Freedom of foreign movement (CIRI)	.587	5869	85.59%

Sub-component 2.2.E: Personal integrity and security

Correlation with:	Correlation coefficient	N	% of GSODI N
The right to life and security of the person is effectively guaranteed (WJP)	.883	535	7.84%
Conflict intensity (BTI) (inversed)	-.625	1009	14.71%

Subattribute 2.3: Social rights

Correlation with:	Correlation coefficient	N	% of GSODI N
Equal opportunity (BTI)	.805	1009	14.71%

Sub-component 2.3.A: Social group equality

Correlation with:	Correlation coefficient	N	% of GSODI N
Equal treatment and absence of discrimination (WJP)	.781	535	7.80%
Ethnic group exclusion (Ethnic Power Relations - EPR)	-.390	4246	61.92%
Equal opportunity (BTI)	.749	1009	14.71%

Sub-component 2.3.B: Basic needs provisions

Correlation with:	Correlation coefficient	N	% of GSODI N
Social safety nets (BTI)	.818	1003	14.71%

Sub-component 2.3.C: Gender equality

Correlation with:	Correlation coefficient	N	% of GSODI N
Women's social rights (CIRI)	.668	3269	47.67%
Women's economic rights (CIRI)	.621	5720	83.42%

Attribute 3: Checks on government

Correlation with:	Correlation coefficient	N	% of GSODI N
Separation of powers (BTI)	.841	1009	14.71%

Subattribute 3.1: Effective parliament

Correlation with:	Correlation coefficient	N	% of GSODI N
Government powers are effectively limited by the legislature (WJP)	.743	535	7.83%
Separation of powers (BTI)	.776	1009	14.76%

Subattribute 3.2: Judicial independence

Correlation with:	Correlation coefficient	N	% of GSODI N
Government powers are effectively limited by the judiciary (WJP)	.827	535	7.83%
Judicial independence (BTI)	.797	1009	14.71%
Independence of the judiciary (CIRI)	.686	5846	85.26%

Subattribute 3.3: Media integrity

Correlation with:	Correlation coefficient	N	% of GSODI N
Government powers are subject to non-governmental checks (WJP)	.817	535	7.83%

Attribute 4: Impartial administration

Correlation with:	Correlation coefficient	N	% of GSODI N
Government regulations are applied and enforced without improper influence (WJP)	.870	535	7.83%
Basic administration (BTI)	.667	1009	14.71%

Subattribute 4.1: Absence of corruption

Correlation with:	Correlation coefficient	N	% of GSODI N
Absence of corruption (WJP)	.901	535	7.83%
Government regulations are applied and enforced without improper influence (WJP)	.868	535	7.83%
Control of corruption (WGI)	.917	3216	46.90%
Prosecution of office abuse (BTI)	.751	1009	14.71%
Anti-corruption policy (BTI)	.783	1009	14.71%

Subattribute 4.2: Predictable enforcement

Correlation with:	Correlation coefficient	N	% of GSODI N
Government regulations are effectively enforced (WJP)	.797	535	7.83%
Administrative proceedings are conducted without unreasonable delay (WJP)	.677	535	7.83%
Government effectiveness (WGI)	.878	3215	46.89%
Basic administration (BTI)	.630	1009	14.71%
Implementation (BTI)	.761	1009	14.71%

Subattribute 5.1: Civil society participation

Correlation with:	Correlation coefficient	N	% of GSODI N
Interest groups (BTI)	.667	1009	14.71%
Civil society participation (BTI)	-.704	1009	14.71%

About the author

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About International IDEA

The International Institute for Democracy and Electoral Assistance (International IDEA) is an intergovernmental organization with the mission to advance democracy worldwide, as a universal human aspiration and enabler of sustainable development. We do this by supporting the building, strengthening and safeguarding of democratic political institutions and processes at all levels. Our vision is a world in which democratic processes, actors and institutions are inclusive and accountable and deliver sustainable development to all.

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The Global State of Democracy is a biennial 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.

The second edition of the report provides a health check of democracy and an overview of the current global and regional democracy landscape.

This document presents revised and updated information about all the variables included in the GSoD indices data set that enabled the construction of Version 4 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 1975–2019.

The data underlying the GSoD Indices is based on a total of 116 indicators developed by various scholars and organizations using different types of source, including expert surveys, standards-based coding by research groups and analysts, observational data and composite measures.