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The Global State of Democracy Indices Methodology

Conceptualization and Measurement Framework

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The Global State of Democracy Indices Methodology: Conceptualization and Measurement Framework is the first in a series of documents prepared by International IDEA to present the Global State of Democracy (GSoD) indices. It presents the theoretical framework that guided the construction of the indices. This methodology complements *The Global State of Democracy Indices Codebook* (Tufis 2017a), which presents information about the data set, including variables, attributes of democracy, subattributes, subcomponents and indicators, and *The Global State of Democracy Indices: Technical Procedures Guide* (Tufis 2017b), which outlines the technical aspects of constructing the indices.

The Global State of Democracy (GSoD) indices depict democratic trends at the country, regional and global levels across a broad range of different attributes of democracy in the period 1975–2015 but do not provide a single index of democracy. The indices produce data for 155 countries. The data underlying the indices is based on 98 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.

The Global State of Democracy 2017: Exploring Democracy's Resilience (International IDEA 2017) 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. It explores the conditions under which democracy can be resilient and how to strengthen its capacity as a system to overcome challenges and threats.

The full publication, as well as the GSoD Indices Database, can be accessed online: <http://www.idea.int/gsod>.

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Introduction and background

Sparked by its 20th anniversary in 2015, International IDEA renewed its commitment and vision to be a visible global actor, voice and agenda-setter in the democracy-building field. With this goal in mind, the Institute has initiated a periodic publication, *The Global State of Democracy* (International IDEA 2017), which analyses key topics related to democratic development. The report draws on multiple sources of information, including the newly developed Global State of Democracy (GSoD) indices, which support the comprehensive analysis of the global state of democracy.

This methodology document focuses on the conceptual and measurement frameworks underlying the GSoD indices. However, it is useful to anchor it in the overarching objectives of *The Global State of Democracy*, which are to:

1. assess the global state of democracy by analysing different topical democracy issues;
2. diagnose critical global and regional trends and developments that reflect the current state of democracy around the world;
3. identify opportunities for improving or reforming democracy, paying special attention to diversity, gender and security;
4. draw attention to good practices; and
5. complement global and regional overviews of democratic development with analyses of particular issues that fall within International IDEA's mandate and areas of expertise.

This methodology document outlines the conceptual distinctions and measurement procedures on which the GSoD indices are based.

The document is structured as follows. Chapter 1 provides an overview of the overall objective. Chapter 2 details the GSoD conceptual framework, including comparisons with International IDEA's State of Democracy Assessment Framework. Chapter 3 expands on the empirical indicators selected, including information on sources and the procedures used to aggregate the indicators into indices of democratic features at the attribute and subattribute levels. Chapter 4 presents a comparison with existing measures that attempt to capture relatively similar aspects of democracy at the attribute, subattribute or subcomponent levels. Chapter 5 presents cautionary notes.

A separate References section is also included. The document ends with Annexes outlining the GSoD conceptual framework; the attributes, subattributes, assessment questions and empirical indicators; an overview of indicators and sources; dimensionality tests; and correlations between GSoD indices and extant measures.

1. The objective of International IDEA's Global State of Democracy indices

The objective behind the Global State of Democracy (GSoD) indices is to provide systematic and nuanced data that captures trends at the global, regional and national levels related to International IDEA's comprehensive understanding of democracy. The indices turn a broad range of empirical indicators from various data sets into measures (attributes, subattributes and subcomponents) of different aspects of democracy. They also provide scores for virtually all the independent countries in the world with more than one million inhabitants for the period 1975–2015. The indices can assist stakeholders, including policymakers, researchers and civil society actors, in their analyses of trends related to different aspects of democracy, and their identification of priority policy areas. In addition, the quantitative data lends itself to further uses,

such as the comparison of scores across countries and within countries over time for disaggregated aspects of democracy.

Like the original State of Democracy (SoD) Assessment Framework (Beetham et al. 2008), which has primarily been used for qualitative democracy assessments, the aim is to construct a framework with universal applicability. So, rather than creating an overarching democracy index that offers a single score per country, the GSoD indices provide measurements of distinct aspects of democracy, which are emphasized by one or more major traditions within democratic thought.

Nonetheless, it is important to emphasize that International IDEA's broad understanding of democracy as popular control over public decision-making and political equality is compatible with different formal and informal institutional arrangements. These principles are open to a context-sensitive implementation of universal standards around the world. Within this conceptual framework, it is assumed that a democratic political system can be achieved and organized in a variety of ways, and the principles can be fulfilled to varying degrees. This perspective has informed and influenced the development of a disaggregated measurement framework that provides users with more nuanced information compared to a single 'mash-up' index that collapses all the attributes into a single score.

The GSoD data set includes separate, fine-grained indices and subindices for five attributes of modern democracy: (a) representative government, (b) fundamental rights, (c) checks on government, (d) impartial administration and (e) participatory engagement. These measures build on an elaborate conceptual framework that is explicitly rooted in International IDEA's SoD framework and academic works on democratic theory (see Chapter 2). It is, however, necessarily somewhat narrower and has been modified since some of the features captured by the SoD Assessment Framework do not lend themselves to systematic cross-national and longitudinal measurement. See Annex E for more information.

The conceptual framework has guided the selection of relevant and reliable indicators with a high coverage in terms of years and countries. These rely on various types of source and have been collected from extant data sets compiled by different organizations and researchers. Any interested party can have full and free access to the country-level data for all indices, downloadable from International IDEA's website. Almost all the underlying indicators extracted from various data sets are also available (within the limitations of copyright regulations and other limitations attached to external data sources). The selected indicators are aggregated into nuanced index scores. These scores are supplemented by uncertainty estimates to help users judge whether apparent differences are statistically significant.

Taken together, the GSoD indices have a number of strengths compared to many extant measures of democracy (see Chapter 4). They are based on a broad understanding of democracy fleshed out in an elaborate conceptual framework, and the different steps in the construction of the indices are transparent and explicitly justified. The indices themselves offer nuanced distinctions in the form of interval scale measurement. This means that the scores are graded; and that the numbers express a rank order and the exact differences between the values. In contrast, nominal data only show that some things are different; similarly, ordinal scale measurement ranks phenomena but the distances between scores are not known so it is not possible, for instance, to meaningfully calculate the average (without relying on rather demanding assumptions).

The GSoD data set offers four indices at the attribute level and 16 indices at the subattribute level based on 98 indicators. In addition, the data set contains an 'intermediate' contestation index (see Chapter 3) and eight subcomponent indices for two subattributes:

civil liberties and social rights (see Chapter 3 and Annex A). The underlying data is drawn from a variety of high-quality data sets based on different types of sources. Finally, for almost all indices, the yearly scores for each country are accompanied by uncertainty estimates that can be used to assess whether differences between countries and within countries over time are statistically significant. The only exceptions are those subattributes only captured by the use of observational data.

2. International IDEA's Global State of Democracy conceptual framework

The point of departure for the conceptual framework of International IDEA's GSoD indices was the SoD Assessment Framework (Beetham et al. 2008). A number of adjustments were made in order to establish internal coherence in the conception of attributes of democracy and to enhance the theoretical links between different levels of the framework—that is, the principles, attributes, subattributes, subcomponents and indicators (see Annex F for a detailed discussion). These modifications were also necessary to transform the original SoD framework from an in-country, synchronic, qualitative democracy assessment tool into a systematic instrument for cross-national, diachronic, quantitative measurement of the state of democracy.

This chapter outlines the conceptual framework behind the construction of the GSoD indices: the democratic principles and the associated attributes and subattributes. It concludes with an overview of the conceptual structure that guides the measurements.

2.1. Two democratic principles

Democracy means rule by the people. The obvious contrast to democracy is autocracy, or rule by a narrow, privileged elite that is not subjected to popular control. Beyond these parameters, however, there is much disagreement about the meaning of democracy. The definition of democratic principles presented here is grounded in considerations about the basic premises underlying the ideal of democratic rule. This explication of the premises makes it possible for others to judge their legitimacy and validity, and their alignment with the principles (Adcock and Collier 2001).

David Beetham, one of the main contributors to the development of the SoD framework, argued that the motivations behind democracy are (a) 'the idea of human dignity or worth, and its core value is that of human self-determination or autonomy … autonomy is understood collectively, as a sharing in the determination of the rules and policies for the association of which one is a member, and to whose authority one is subject' (Beetham 1999: 7); and (b) 'that people are generally the best judges of their own interests' (Beetham 1999: 13). This emphasis on equal respect for individuals and their capacity for creative self-determination, according to Beetham (1999: 18), underpins democracy as a universal value (see also Buchanan 2004; Fukuyama 1992; Sen 1999). The reason is that mutual respect and autonomy are also the premises that suggest we should respect cultural differences to the extent that they are compatible with these premises. Thus, democracy and respect for cultural differences do not contradict each other—their justification has overlapping roots, which means that they have similar claims to legitimacy.

The premises about human dignity and judgement are very similar to those proposed by Dahl (1989), who argued strongly that all interests should receive the same weight and that virtually all adults are competent to participate in collective decision-making regarding their own interests. In favour of these underlying premises, opponents of non-democratic 'guardianship' often refer to the lack of reliable non-democratic

alternatives (undemocratic regimes are mostly repressive and do not generally outperform democracies in terms of creating human development), shared moral intuitions about just political rule (the fundamental idea of equal human dignity and sufficient competence to take part in decision-making is widespread), general risk aversion (we are generally more secure and know what we get under democratic rule), and sound scepticism of paternalism (benevolent dictators are a rare phenomenon) (see e.g. Beetham 1999; Buchanan 2004; Christiano 2011; Dahl 1989; Gould 1988; Held 2006; Rawls 1971).

From these premises, Beetham (1999: 1–13) and International IDEA (Beetham et al. 2008: 20–21) derived popular control and political equality as the two core principles of democracy underlying the SoD conceptual framework. Consequently, popular control over public decision-making and decision-makers, and equality of respect and voice between citizens in the exercise of that control, also underpin the GSoD framework.

That is not to say that these principles only have one suitable institutional embodiment. The core democratic principles are compatible with different, context-sensitive and context-specific institutional set-ups, which means that the principles can be realized in a variety of ways. Democracy is, for example, compatible with various electoral systems (majoritarian, proportional or mixed), different forms of government (presidentialism, parliamentarian or mixed), different legal systems (common law, civil law, and so on), different types of political parties and party systems, and unitary or federal states There are also some institutional arrangements that are not compatible with the principles and therefore undemocratic, because they do not align with the fulfilment of popular control and political equality.

The first principle concerns *what* is being distributed (political control over authoritative political decision-making) while the second principle concerns *how* it should be distributed (equally) and implemented (impartially). However, popular control on its own does not mean that all individuals have equal influence over authoritative political decision-making. Conversely, political equality alone does not mean that there is any (collective) popular control over decision-making in a society. This means that the principles complement each other and that they are both required. In other words, popular control and political equality are necessary and jointly sufficient principles of democracy. Hence, a specification of what democracy is should consider both.

A related question is whether the two principles jointly are sufficient to capture the democratic ideal. Most importantly, the question arises why political liberty or freedom is not explicitly mentioned as one of the principles. The answer is essentially that they are implied by the other two principles. Meaningful popular control and political equality are not possible without respect for fundamental freedoms such as civil and political liberties. Moreover, popular control and political equality mean that there is self-government (directly or through representatives) as opposed to government by internal or external guardians. Accordingly, there is freedom in the sense of living under laws that people have (mostly through political representatives) been part of making, rather than laws imposed from above.

In this way, the democratic principles are based on explicit premises, on the one hand, and correspond to the values that are generally associated with democracy, on the other (Dahl 1989; Hansen 1989; Kelsen 1920; Lauth 2004; Munck 2016). The original SoD framework lists participation, authorization, representation, accountability, transparency, responsiveness and solidarity as key intermediary values (Beetham et al. 2008: 22–24). See Annex F for more details of the original SoD framework and the adjustments made to transform it into a systematic and clear conceptual framework for the GSoD indices.

2.2. Attributes and subattributes

Since the principles of democracy are general and abstract, they have to be specified and broken down into measurable attributes and subattributes that can be used to develop a transparent and precise measurement framework. As a point of departure, the project used the SoD framework's somewhat more detailed explication of the principles:

> The democratic ideal in and of itself seeks to guarantee equality and basic freedoms; to empower ordinary people; to resolve disagreements through peaceful dialogue; to respect difference; and to bring about political and social renewal without convulsions. (Beetham et al. 2008: 17)

Accordingly, the GSoD indices seeks to capture five issues: first, the extent to which there is effective popular control over public decision-makers (vertical accountability); second, the extent to which the citizens hold politically relevant freedoms and power resources; third, the extent to which executive powers are checked effectively by other powers (horizontal accountability); fourth, the extent to which public authorities are impartial and predictable in implementing the law; and, fifth, the extent to which people have and make use of various opportunities for political participation at different levels. Thus, the framework distinguishes between the following five attributes (cf. 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)

This list of attributes covers the features that are conventionally associated with democracy, primarily representative government. However, it also covers issues often neglected or consciously left out by other attempts to conceptualize democracy. The GSoD conceptual framework draws on the various understandings of democracy generally known as electoral democracy, liberal democracy, social democracy and participatory democracy. It therefore demonstrates partial overlaps with the features emphasized by these different traditions of democratic thought (see Coppedge et al. 2011; Cunningham 2002; Held 2006; Møller and Skaaning 2011, 2013a). Annex A is a matrix that shows which attributes and subattributes of the GSoD conceptual framework are shared with each of these traditions.

These issues are discussed in more detail in the following sections, where the five attributes are further divided into a number of subattributes. See Beetham (1999) and International IDEA (2008) for a more detailed treatment of the link between the two principles of democracy and these attributes—or, more correctly, a similar set of attributes, since the GSoD framework differs slightly from Beetham's distinctions and the SoD framework. The mediating values—linking principles to attributes and presented in the SoD framework (see Beetham et al. 2008: 24)—are explicitly or implicitly referred to in the discussion of the attributes. For a brief overview of the use of the original SoD Framework see Annex F.

Attribute 1: Representative Government

Of the five attributes of democracy, arguably the most essential and least contested is representation (Beetham 1999: 155, 162–63). It emphasizes contested and inclusive popular elections for legislative and directly or indirectly elected executive office (Dahl 1971; see also Rokkan 1968; Skaaning, Gerring and Bartusevicius 2015; Møller and Skaaning 2011; Munck 2009). Most of the features associated with representative government are covered by the concepts of electoral integrity (see Norris 2014), free and fair elections (see Elklit and Svensson 1997) and electoral democracy (see Diamond 1999 [2011]).

For this attribute, the framework distinguishes between four subattributes:

- 1.1. The *Clean Elections* subattribute denotes the extent to which elections for national, representative political office are free from irregularities, such as flaws and biases in the voter registration and campaign processes, voter intimidation and fraudulent counting.
- 1.2. The *Inclusive Suffrage* subattribute denotes the extent to which adult citizens have equal and universal passive and active voting rights.
- 1.3. The *Free Political Parties* subattribute denotes the extent to which political parties are free to form and campaign for political office.
- 1.4. The *Elected Government* subattribute denotes the extent to which national, representative government offices are filled through elections.

Attribute 2: Fundamental Rights

Fundamental rights in the form of liberal and social rights support both fair representation and the vertical mechanism of accountability that the first attribute seeks to achieve. Thus, the relevance of this attribute to democracy is due to the importance of individual human rights for securing both popular control and political equality in practice (Beetham 1999: 33–49, 89–114; Beetham et al. 2008: 27). Without equal protection for negative and positive liberties, the meaningfulness of political equality is undermined (Saward 1998; Dahl 1989; Meyer 2005; Heller 1930; O'Donnell 2007, 2010). In short, 'democracy is only secure if the conditions for the exercise of the popular will are guaranteed on an ongoing basis, through a protected set of basic freedom rights' (Beetham 2004: 65).

Scholars disagree about whether to treat fundamental human rights as democratic rights. Proponents of minimalist, purely electoral definitions of democracy, such as Schumpeter (1974; see also Alvarez et al. 1996; Boix, Miller and Rosato 2014), argue that democracy should not be conflated with liberal freedoms, social equality or the 'good life' more generally because this leads to conceptual overstretch and confusion. This critique applies to all the other attributes apart from representative government. Schumpeter even goes so far as to not require universal suffrage, and to suggest that it is up to the demos itself to decide who should have suffrage.

Then again, the capacity to exercise political rights arguably rests on the presence of due process, and civil rights and liberties (Kelsen 1920; Lauth 2004; Merkel 2004). As Beetham (2004: 61) emphasized, 'if people are to have any influence or control over public decision making and decision makers, they must be free to communicate and associate with one another, to receive accurate information and express divergent opinions, to enjoy freedom of movement and to be free from arbitrary arrest and imprisonment'. In addition, the protection of fundamental rights relies on personal security and a legal system that has sufficient integrity and capacity to uphold them by prosecuting rights

violations and holding fair trials. These issues have historically been associated with the concept of liberal democracy.

Finally, political equality also rests on individuals possessing a basic level of power resources. This criterion clearly goes beyond the dominant view found in the empirical democratization literature, in which social welfare and democracy are treated as analytically distinct phenomena rather than being lumped together (Diamond 1999: 8; Karl 1990: 2; Linz 2000: 57–58). One of the main arguments in favour of this position is that if social rights are characterized as democratic rights, the number of testable research questions is reduced—because some relationships become true by definition (Alvarez et al. 1996: 18). However, the more comprehensive perspective is not necessarily subject to this problem as long as users of the data are given the opportunity to assess the empirical relationship between different aspects of the same overarching concept.

Moreover, if power resources, such as education, health and income, are not provided, economic and social inequalities are likely to spill over into unequal political influence. To quote Beetham again:

> If freedom is a good only because of the value that lies in exercising it,
> then those who lack the capacity or resources to exercise a given freedom
> are being denied the enjoyment of it, even though they may not formally
> be being obstructed. In similar vein, we could say, it is a condition of
> exercising one's civil and political rights that one should be alive to do so,
> and should have the education and, where necessary, the resources to take
> advantage of them. (2004: 65; see also Plant 1991: Ch.7)

People should, therefore, have access to a minimum platform of basic welfare that supports their ability to be politically active and reduces the political advantages of those who are better placed.

Furthermore, rights imply equality: otherwise, they would just be privileges. This means that all rights should be equally guaranteed to all. Thus, discrimination due to economic status, social identity or gender is not in alignment with democratic principles as preferential treatment of particular groups violates the democratic values of human dignity and equal worth. These issues are generally associated with the concept of egalitarian or social democracy.

Taken together, the fundamental rights attribute has significant overlap with the rights and liberties covered by the International Covenant on Civil and Political Rights (with the exception of article 25, which refers to representative government captured by attribute 1), as well as the International Covenant on Economic, Social and Cultural Rights.

For this attribute, the framework distinguishes between three subattributes:

- 2.1. The *Access to Justice* subattribute denotes the extent to which the legal system is fair (citizens are not subject to arbitrary arrest or detention and have the right to be under the jurisdiction of—and to seek redress from—competent, independent and impartial tribunals without undue delay).
- 2.2. The *Civil Liberties* subattribute denotes the extent to which civil rights and liberties are respected (citizens enjoy the freedoms of expression, association, religion, movement, and personal integrity and security).
- 2.3. The *Social Rights and Equality* subattribute denotes the extent to which basic welfare (social security, health and education) and political and social equality between social groups and genders have been realized.

Attribute 3: Checks on Government

Besides regular elections, the exercise of political power needs to be subject to continuous scrutiny (Beetham 1999: 155, 163–65; Beetham et al. 2008: 24). If the other branches of government (the legislature and the judiciary) or a critical and pluralistic press does not check executive power, it is more prone to be abused for private gain and to bias in political decision-making and implementation (Holmes 1997; Lauth 2004; Merkel 2004; Montesquieu 1989; O'Donnell 2007, 2010; Vile 1998). Note that the request for a critical and pluralist press goes beyond freedom of expression captured under civil liberties in connection with attribute 2. For example, corruption in the media is not directly related to freedom of expression but it clearly undermines media integrity.

In other words, vertical accountability through elections should be supplemented by horizontal accountability between elections. That said, it is important to recognize the potential trade-off between vertical and horizontal accountability since the majority will and checks on government—and respect for fundamental rights—do not always go hand in hand (Mill 1996[1859]; Hamilton, Maddison and Jay 1995[1787/1788]; Tocqueville 1988 [1835/1840]). Habermas (1996), however, proposes that popular sovereignty, fundamental rights and the rule of law are not only compatible but also mutually constitutive, meaning that institutional restraints serve to enable, rather than limit, effective democracy and vice versa (see also Beetham 1999, Ch. 5; Holmes 1997; Lauth 2004; Merkel 2004).

This attribute is also related to the liberal-democratic tradition in political theory. The responsiveness of representatives to citizens is not sufficient for effective popular control over government: 'The accountability of all officials, both to the public directly and through the mediating institutions of parliament, the courts . . . and other watchdog agencies, is crucial if officials are to act as agents or servants of the people rather than as their masters' (Beetham et al. 2008: 24).

For this attribute, the framework distinguishes between three subattributes:

- 3.1. The *Effective Parliament* subattribute denotes the extent to which the legislature is capable of overseeing the executive.
- 3.2. The *Judicial Independence* subattribute denotes the extent to which the courts are not subject to undue influence from the other branches of government, especially the executive.
- 3.3. The *Media Integrity* subattribute denotes the extent to which the media landscape offers diverse and critical coverage of political issues.

On the judicial independence subattribute, it is relevant to mention the ongoing debate about the democratic legitimacy of judicial review. Some argue that, in its strongest form, it is 'politically illegitimate, so far as democratic values are concerned: by privileging majority voting among a small number of unelected and unaccountable judges, it disenfranchises ordinary citizens and brushes aside cherished principles of representation and political equality' (Waldron 2006: 1353; see also Bellamy 2007). Others think that strong judicial review can be justified on democratic grounds and is therefore compatible with democratic values (Lever 2009). Suffice to say here that judicial independence should support the courts exercising weak judicial review (on the distinction between strong and weak judicial review see Waldron 2006: 1354–55).

Attribute 4: Impartial Administration

The government and public administration more generally should implement official public policies in an impartial manner (Beetham 1999: 165; Beetham et al. 2008: 75–76). If the implementation is unfair and unpredictable, large discrepancies between official laws and policies, on the one hand, and practices, on the other, undermine the fulfilment of democratic principles (Lauth 2004; Merkel 2004; Munck 2016; Habermas 1995; Ross 1952; O'Donnell 2010; Alexander and Welzel 2011). Thus, democracy is a matter not only of access to power and control of power, but also of the exercise of power.

This point also applies to the fundamental rights attribute, which covers the content of policies rather than the fairness and predictability of policy implementation more generally. Based on the distinction between access to power and exercise of power, Mazzuca (2010) argues that the first concerns the political regime, while the latter concerns the state; and that these should not be conflated. However, separating these issues is more easily said than done as the exercise of power, for instance through forms of political repression, obviously influences the access to power; and the content and implementation of political decisions are arguably directly related to democratic principles. A similar argument can be made regarding the attribute *checks on government*.

Since impartial administration to a large extent overlaps with the concept of the rule of law (Rothstein 2012), this attribute is also rooted in the tradition that emphasizes liberal aspects of democracy. For this attribute, the framework distinguishes between two subattributes:

- 4.1. The *Absence of Corruption* subattribute denotes the extent to which the executive, and public administration more broadly, does not abuse office for personal gain.
- 4.2. The *Predictable Enforcement* subattribute denotes the extent to which the executive and public officials enforce laws in a predictable manner.

Attribute 5: Participatory Engagement

Democratic institutions tend to be hollow if not filled by active citizens in connection with and between different kinds of elections. In other words, politically involved citizens are considered an important part of democracy (Beetham 1999: 156; Beetham et al. 2008: 28). The more citizens are allowed to participate at all levels of government and make actual use of these opportunities, through participation in dynamic civil society organizations, national and subnational elections and referendums, the more popular control and responsiveness can be achieved (Barber 1988; Macpherson 1977; Mansbridge 1983; Pateman 1970). This is the main agenda of the participatory democracy tradition.

Whether popular participation also increases political equality depends on how representative of the whole population the engaged citizens are. Moreover, whether to be politically involved is an individual choice, and national political systems can be democratic without instruments of direct democracy, vibrant civil societies and institutions of subnational democracy. Nonetheless, everything else being equal, high levels of different forms of popular participation will tend to reflect more inclusive and representative involvement than very low levels of popular participation. Without any popular involvement, democratic institutions become empty and meaningless shells, whereas with active participation democracy is vibrant.

For this attribute, the framework distinguishes between four subattributes:

- 5.1. The *Civil Society Participation* subattribute denotes the extent to which organized, voluntary, self-generating and autonomous social life is dense and vibrant.
- 5.2. The *Electoral Participation* subattribute denotes the extent to which citizens vote in national legislative and (if applicable) executive elections.
- 5.3. The *Direct Democracy* subattribute denotes the extent to which citizens can participate in direct popular decision-making.
- 5.4. The *Subnational Elections* subattribute denotes the extent to which citizens can participate in free elections for regional and local governments.

Subnational democracy could have been placed under the representative government dimension since it concerns representation at the subnational level. However, here we stick to the convention and separate these issues. Arguably, subnational representation to some degree reflects territorial size, population, ethnic concentration, etc. In line with constructing a cross-national quantitative measurement, we keep the focus on the national level regarding the representative government attribute and argues that it makes good sense to consider regional and local elections as opportunities of participatory engagement that supplements voting rights at the national level. This is what the subnational elections subattribute has in common with actual voting in national elections, civil society participation, and mechanisms of direct democracy.

Following the detailed description of the principles, attributes and subattributes, Table 2.1 presents an overview of the conceptual framework underlying the GSoD indices and Figure 2.1 sets out an example of this conceptual framework all the way to the indicator level.

The framework consists of 16 subattributes linked to the five attributes. Each subattribute is associated with an assessment question that guides the selection of relevant empirical indicators. It is important to note that the different conceptions of democracy that are combined in this framework (electoral democracy, liberal democracy, social democracy and participatory democracy) are not considered to be orthogonal or contradictory. Instead, the different understandings and aspects are assumed to be compatible and complementary.

TABLE 2.1.

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. Subnational Elections	To what extent are there free regional and local elections?

FIGURE 2.1.

Example of the link between conceptual distinctions and indicators (Attribute 1 Representative government)

Attributes	Representative government
Subattributes	1.1 Clean elections / 1.2 Inclusive suffrage / 1.3 Free political parties / 1.4 Elected government
Indicators	1.1.1 EMB autonomy / 1.1.2 Election voter registry / 1.1.3 Election other voting irregularities / 1.1.4 Election government intimidation / 1.1.5 Election free and fair / 1.1.6 Competition
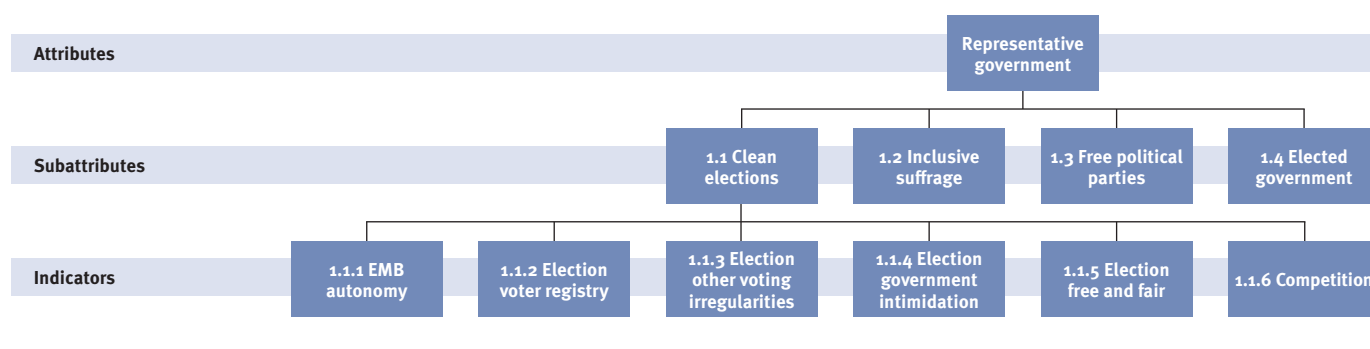
Note: Only the indicators linked to subattribute 1.1 on clean elections are shown.

3. Measuring the global state of democracy

The Global State of Democracy produces indices to capture the main attributes of democracy. Each attribute, in turn, covers two to four subattributes. The subattributes are operationalized using a series of indicators from existing data sets (see Annex B and Annex C).

The goal is to cover the time period since the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights took effect in 1976. The previous year is included as a reference point. Hence, the period covered thus far is 1975–2015. This period overlaps with what is often termed 'the third wave of democratization' (Huntington 1991), which began with the first free elections in Portugal in 1975 exactly one year after the start of the Carnation Revolution on 25 April 1974. This period is particularly important for International IDEA because it serves as the most common reference point for current democratic trends. This is reflected in the fact that many contemporary debates about democratic development and resilience focus on these four decades (e.g., Diamond 2011; Levitsky and Way 2015; Merkel 2010; Møller and Skaaning 2013a; Puddington 2011; Schedler 2013). Other reasons for not going further back in time are the higher level of confidence in more recent data on some of the indicators and the fact that there is generally more relevant and extensive data available for recent decades.

The GSoD indices have global coverage. Since the Varieties of Democracy (V-Dem) Database is the largest source of data for the construction of the indices, the data collection focuses on the 155 independent countries covered by the V-Dem data set. A number of semi-sovereign units (Palestine/Gaza, Palestine/West Bank and Somaliland) and micro-states with a population of less than one million have been excluded. V-Dem procedures on how to treat units that have split (such as the Soviet Union and Yugoslavia) or merged (such as East Germany and West Germany) during the period (see Coppedge et al. 2016a) have also been adopted. The resulting indices capture democratic development in the vast majority of the countries in the world.

All the indicators are compiled in a single database in a country–year format, which means that a country receives a single score per indicator for a particular year. Indicators not originally available in a country–year format are transformed to fit this format—see the Codebook (Tufis 2017a) for details. The aggregation procedures used to construct the various indices at the level of subcomponents, subattributes and attributes are presented below.

3.1. Criteria for indicator selection

The operationalization of the GSoD conceptual framework takes the assessment questions presented in Table 2.1 as a starting point. The most important task is to identify empirical indicators that tap into the features emphasized by the different subattributes. It is important to highlight that International IDEA has not collected new data for this measurement exercise and is therefore exclusively reliant on existing sources.

The main priority of the construction of indices is a high level of concept–measure consistency; that is, the extent to which the indicators capture the core meaning of the particular concept that is being operationalized (Adcock and Collier 2001; Goertz 2006, Ch. 4; Munck 2009). In addition, the following criteria guide the selection of indicators:

1. Indicators must be produced through transparent and credible data generating processes.
2. There must be extensive coverage: the indicators should include scores for at least 140 countries from different regions for at least 30 years within the period 1975–2015.
3. There must be multiple indicators for each subattribute, especially if an adequate observable indicator is not available (with the exception of the inclusive suffrage (1.2), electoral participation (5.2) and direct democracy (5.3) subattributes, which are measured using only one indicator each, although the latter is a composite measure based on 12 variables).
4. The data sets from which the indicators are extracted should be updated regularly.

Moreover, the measure attempts to make use of indicators from different data sets based on different types of data and to prioritize data sources that are readily available in a systematic, downloadable format, free of charge. The International Country Risk Guide (ICRG) is the only data set used that is not freely available. Thus, the ICRG scores are used for the construction of index values but not made publicly available on International IDEA's website. A number of trade-offs mean that not all the criteria are fulfilled in every case, but the construction of the GSoD indices applies most of them in most cases.

The reason why multiple indicators from different data sets are used is that, given high-quality indicators, a cumulative approach to measurement generally improves confidence in the scores. The combined efforts of various data providers make the resulting measures more nuanced and reliable. The use of different indicators enables capture of related, but nonetheless distinct, aspects of the features to be measured. This procedure also tends to reduce the influence of idiosyncratic measurement errors associated with individual indicators. Finally, drawing on several indicators allows an assessment to be made of the level of agreement between them, and this information can be used to calculate uncertainty estimates for the indices (see Pemstein, Melton and Meserve 2010; Fariss 2014).

Unfortunately, many recent efforts at data collection, such as the Rule of Law Index by the World Justice Project, the Perceptions of Electoral Integrity by the Electoral Integrity Project and the Bertelsmann Transformation Index, only cover a small number of years. Their indicators are therefore not used because there would not be sufficient overlap with other sources with longer time-series. Other data sets, such as the Cingranelli-Richards (CIRI) Human Rights Database, are not used because they have not been updated recently and in some instances have been discontinued. However, indicators from these sources are used when assessing the validity and reliability of the GSoD indices (on correlations between GSoD indices and extant measures see Annex E). More particularly, the correlations between the GSoD indices and widely used and recognized alternatives

were assessed, and some of the largest disagreements discussed. The selection of indicators was an iterative process. Potentially relevant indicators were suggested, assessed and sometimes discarded over several rounds by members of the team and the Expert Advisory Board. The presentation of the selected indicators below discusses examples of discarded indicators and the reasons for their exclusion.

3.2. Different types of source and data sets

The GSoD indices summarize information from 98 indicators collected from 14 data sets. Some of these indicators, such as the elected office and direct democracy indicators from V-Dem, are composite measures based on several sub-indicators. The 14 data sets are listed in Table 3.1.

TABLE 3.1.

Data sets used in the compilation of the Global State of Democracy indices

Data set	Data provider	Reference
Civil Liberties Dataset (CLD)	Møller and Skaaning	‹http://ps.au.dk/forskning/forskningsprojekter/dedere/datasets/›
Food and Agriculture Organization (FAO) statistics	FAO	‹http://www.fao.org/faostat/en/#home›
Gapminder	Gapminder	‹http://www.gapminder.org/›
Global Health Data Exchange (GHDx)	Global Health Data Exchange	‹http://ghdx.healthdata.org/›
Human Rights Protection Scores (HRPS)	Fariss	‹http://humanrightsscores.org/›
International Country Risk Guide (ICRG)	Political Risk Services	‹http://epub.prsgroup.com/products/icrg ›
Women in Politics data (IPU)	Inter-Parliamentary Union	‹http://www.ipu.org/wmn-e/world.htm›
Lexical Index of Electoral Democracy (LIED)	Skaaning, Gerring and Bartusevicius	‹http://ps.au.dk/forskning/forskningsprojekter/dedere/datasets/›
Latent Judicial Independence Scores (LJIS)	Linzer and Staton	‹http://polisci.emory.edu/faculty/jkstato/page3/index.html›
Media Freedom Data (MFD)	Whitten-Woodring and Van Belle	‹http://faculty.uml.edu/Jenifer_whittenwoodring/MediaFreedomData_000.aspx›
National Elections Across Democracy and Autocracy (NELDA)	Hyde and Marinov	‹http://www.nelda.co/›
Polity IV	Marshall, Jaggers and Gurr	‹http://www.systemicpeace.org/inscrdata.html›
United Nations Educational, Scientific and Cultural Organization (UNESCO) statistics	UNESCO	‹http://data.uis.unesco.org/›
Varieties of Democracy data set (V-Dem)	Varieties of Democracy	‹https://www.v-dem.net/›

These 14 data sets represent four different types of source data:

1. *Expert surveys* (ES). In these surveys, country experts assess the situation on a particular issue in a country. This kind of data is provided by V-Dem and the ICRG.
2. *Standards-based 'in-house coding'* (IC). This type of coding is carried out by researchers and/or their assistants based on an evaluative assessment of country-specific information found in reports, academic publications, reference works, news articles, and so on. This kind of data is provided by V-Dem, Polity IV, LIED, CLD, NELDA and MFD.
3. *Observational data* (OD). This is data on directly observable features such as the ratio of women to men in parliament, infant mortality rates and legislative elections. This kind of data is provided by V-Dem, LIED, NELDA, Gapminder, FAO, UNESCO, GHDx and the IPU.
4. *Composite measures* (CM). These are based on a number of variables that come from different existing data sets rather than original data collection. This kind of data is provided by V-Dem, HRPS and LJIS.

All of these source types and data sets have different strengths and shortcomings (see e.g. Arndt and Oman 2006; Landman and Carvalho 2009: Ch. 3; OHCHR 2012; Raworth 2001; Schedler 2012; Skaaning 2017). For evaluations of specific governance and democracy indicators, see e.g. Munck (2009), Ríos-Figueroa and Staton (2014); Skaaning (2009); Møller and Skaaning (2014a); Coppedge et al. (2011); and Coppedge et al. (2016b).

The advantage of expert surveys is their utilization of the extensive, country-specific knowledge of scholars, journalists, and so on, to capture features that are not easy to observe directly. One potential disadvantage with such data is that it is difficult to make the different experts apply the same standards in their assessments and to rule out individual bias.

With in-house coding it is generally easier to establish cross-country equivalence in the standards employed, but this data collection procedure is dependent on relatively easy access to relevant information and coder biases can also be an issue. Observational data is less susceptible to coder biases, but this type of data is frequently characterized by systematic biases in coverage and it can be very difficult to find relevant indicators that capture a particular phenomenon well, especially those that are not directly observable such as freedom of expression. The advantage of composite measures is that they can utilize information from several variables to achieve more nuanced and comprehensive measurements of a phenomenon, while the potential drawbacks of such measures are the accumulation of problems associated with the different variables and implausible or fuzzy relationships to the concepts they are expected to capture.

Finally, representative surveys of the general population were judged less useful for a number of reasons. These include limited coverage in terms of years and countries, the dissimilar standards generally applied by respondents (both within and across countries and time periods), the large differences in terms of nuanced knowledge about the general dynamics and performance of political institutions and the circumstances where citizens might be afraid to express their honest understanding of the lay of the land. Indicators based on surveys of the general public were therefore not used. In contrast, surveys of the mass public are used to construct the Democracy Barometer, the World Governance Indicators, the EIU Democracy Index, and the WJP Rule of Law Index.

About the data sources

The V-Dem indicators are mainly based on scores provided by multiple, independent coders (usually a minimum of five per indicator) who are guided by elaborate coding guidelines, while some of the more factual or less judgement-based indicators are coded in-house. The scores from the country experts, which involve extensive bridge and lateral coding in order to strengthen comparability, are aggregated into point estimates and confidence bounds by a measurement model based on Bayesian item response theory (IRT) modelling techniques. Bridge coding means that an expert has coded more than one country for all years; lateral coding means that an expert has coded several countries for one year. The measurement model assesses inter-coder reliability, and helps to reduce the impact of individual bias and increase the cross-country equivalence of the indicator scores in a systematic way (see Coppedge et al. 2016c; Pemstein et al. 2015; Marquardt and Pemstein 2017).

The scores included in the ICRG constructed by Political Risk Services (PRS) are assigned based on answers to a series of pre-set questions for each component by a staff member with special country expertise (Howell 2012).

In-house coding is used to construct the indicators included in the Civil Liberties Dataset (Skaaning 2008; Møller and Skaaning 2014b); the NELDA data set (Hyde and Marinov 2014 OR 12); the LIED data (Skaaning, Gerring and Bartusevicius 2015); the Media Freedom Data (Whitten-Woodring and Van Belle (2014; 2017); and the Polity IV project (Marshall, Gurr and Jaggers 2015). Moreover, measures of this kind are the main sources for the Human Rights Protection scores by Fariss (2014) and the Judicial Independence scores by Linzer and Staton (2015), both of which are composite measures constructed by combining information from extant data sets.

CLD, NELDA, LIED and the Media Freedom Data draw on information found in written sources, such as electoral observation reports, human rights reports, academic volumes and articles, and information from news media. The relevant information is then transformed into indicator scores following the specific guidelines used for each data set. All of these data sets are supplemented by systematic inter-coder reliability tests that generally indicate very high reproducibility.

The remaining indicators rely on observational data compiled by V-Dem, UNESCO, FAO, Gapminder, Global Health Data exchange (GHDx) and the Inter-Parliamentary Union (IPU).

3.3. Linking indicators to attributes and subattributes

Annexes B and C present overviews of the indicators considered the most suitable to operationalize the democratic attributes and subattributes, employing the above-mentioned selection criteria. The tables contain brief descriptions of the indicators and the types of sources they are based on, as well as the name of the data set or data provider. The coverage in terms of years and countries, the adjustments made to some of the indicators and other details are described in the Codebook (Tufis 2017a).

Indicators for Attribute 1: Representative Government

Clean Elections
Six indicators are included to capture the clean elections subattribute based on in-house coding and/or expert surveys from V-Dem and LIED. All of the selected indicators tap into the quality of elections. One of the V-Dem indicators and the LIED indicator

reflect free elections more generally, whereas the other V-Dem indicators capture more specific aspects of this feature, such as irregularities in voter registration and government intimidation. The event-specific V-Dem indicators have been revised to fit the country–year format of the GSoD data set. For more information see the Codebook (Tufis 2017a).

As noted above, indicators from the EIP are not used as it is only available for very recent years. The CIRI electoral self-determination indicator is not used because this database is no longer updated. For the same reasons, indicators from Judith Kelley's (2012) Quality of Elections Data and Bishop and Hoeffler's (2016) Free and Fair Elections Database were not used to measure this or other subattributes. An electoral violence indicator from NELDA was considered but excluded since the conceptual match was blurred because the associated question does not specify when the violence took place, who committed the violence and for what purpose. Finally, data from Freedom House was also excluded because the disaggregated scores provided by this organization cover relatively few years. Moreover, Freedom House data has faced serious allegations of bias (Bollen and Paxton 2000; Giannone 2010; Steiner 2016) and other methodological problems (see Munck 2009: Ch. 2).

Inclusive Suffrage
To measure inclusive suffrage, a V-Dem indicator is used that designates the percentage of enfranchised adult citizens. Since inclusive voting rights have not really been a disputed issue in most countries during the third wave of democratization, and because the formal regulations are generally easily accessible and directly observational, it is less problematic that only one indicator is used to measure this subattribute. The indicator only captures the formal regulations for citizens, however, and not the extent to which non-citizens can vote or the extent to which some people might informally be restricted in casting their votes. Moreover, once suffrage has formally been granted, the indicator does not capture whether it disappears in practice in the event of a coup, suspension/abolition of the constitution or a military regime that does not hold elections, unless a new constitution formally establishes a non-electoral regime or suffrage restrictions. Indicators on the actual distribution of political power across social classes, social identity groups and gender can be found under social rights.

Free Political Parties
Nine indicators, partly based on expert surveys and partly in-house coded, from V-Dem, NELDA, Polity and LIED, are used to measure how free political parties are. All of them reflect whether political parties more generally, and opposition parties in particular, are allowed to organize freely and stand in elections. Once again, the events-based NELDA indicators were adjusted to fit the country–year format.

Elected Government
The last subattribute under representative government, elected government, is operationalized using five indicators from V-Dem, LIED and Polity. The V-Dem indicator, developed by Jan Teorell, is a composite measure based on expert coded data on the executive, in-house coded data and observational data. It captures whether the chief executive is elected (directly or indirectly) through popular elections. The in-house coded LIED indicators assess whether there is an elected parliament and an elected (directly or indirectly) executive, while the in-house coded Polity indicators capture whether political power is partly or fully vested in elected offices. The two lowest values of one of the Polity indicators (openness of executive recruitment) were collapsed because they both refer to

non-electoral practices. All of the indicators have a quite formal focus, which means that they do not assess the quality of elections or fully capture the extent to which reserved domains (or tutelary powers) and undue influence by non-elected groups might in practice restrict the effective power of elected officials to govern (see Valenzuela 1992; Merkel 2004).

Indicators for Attribute 2: Fundamental Rights

Access to Justice

On access to justice, V-Dem offers four expert-coded variables that go beyond the independence of the courts. This feature constitutes the core of the judicial independence subattribute under the checks on government attribute. Two of them are based on questions that ask directly whether access to justice is secure and effective for men and women. The others are more concrete as they are based on questions relating to judicial corruption and the removal of judges for misconduct. While there are quite a few measures of judicial independence, not many with a high degree of coverage address fair and equal access to justice more broadly. For example, WJP and Hathaway (2002) provide indicators on fair trails but their data sets only cover a few years. Thus, the V-Dem indicators are only supplemented with an in-house coded CLD measure of the right to a fair trial.

Civil Liberties

A larger number of variables lend themselves to the measurement of the other two subattributes of fundamental rights: civil liberties and social rights. They are initially divided into five subcomponents, each of which reflect core concepts in the human rights literature. The construction of these subcomponent indices enables data users to carry out more focused and disaggregated analyses using measures that have stronger conceptual coherence than highly aggregated indices. Moreover, some of these subcomponent indices help capture some of the issues emphasized in the work of International IDEA in a clearer and more specific way. The so-called cross-cutting themes are gender, diversity and conflict sensitivity.

The five subcomponents under the civil liberties attribute are: freedom of expression; freedom of association and assembly; freedom of religion; freedom of movement; and personal integrity and security.

The first subcomponent, freedom of expression, is measured using seven indicators based on expert surveys from V-Dem and one in-house coded indicator from CLD. The question underlying the CLD variable is fairly all-encompassing, whereas the V-Dem variables are more specific and refer to different aspects of media freedom and to the right to openly discuss political issues and express political opinions outside the mass media. Two of them distinguish between freedom of expression for men and for women.

Three indicators from the same two sources are used to measure freedom of association and assembly. All of them refer directly to freedom of association for political and civil groups. The indicator offered by CLD covers freedom of assembly as well as freedom of association, where association refers to both civil society organizations and political parties. Due to its broad focus, it fits better here than under the political party freedom subattribute, which is already captured by many other indicators.

Since a number of distinct indicators with broad coverage are available for religious freedom, a separate subcomponent index was also constructed for this feature. V-Dem offers two general indicators on religious freedom based on expert surveys. To these were added a similarly broad in-house coded variable from CLD.

Freedom of movement is captured by a general, in-house coded indicator from CLD and three more specific, expert-coded indicators from V-Dem that distinguish between foreign and domestic movement, and provide assessments of the latter feature for both men and women.

To operationalize the last civil liberties subcomponent, personal integrity and security, five indicators of personal integrity rights were used to capture different types of violations, such as forced labour, torture and political and extra-judicial disappearances and killings. These indicators come from V-Dem and Fariss. Since the Fariss indicator is based on a number of extant measures, such as the Political Terror Scale and the Physical Integrity Rights Index, these are not used separately.

In order to capture personal security more broadly, a general indicator on political violence from ICRG is also included. It pertains to different types of conflict and violence, and distinguishes between various levels. Furthermore, it is standards-based rather than events-based, which makes it more suitable for integration into the GSoD data set in a meaningful way than other conflict indicators with a broad scope. Another graded and standards-based conflict indicator, the societal major episodes of political violence measure (see Marshall 2016), was also considered. However, dimensionality analyses show that it is somewhat out of sync with the other indicators, as indicated by the relatively low bivariate correlations of between .28 and .58 and a factor loading below .5.

Social Rights and Equality

A similar approach was taken to the social rights and equality subattribute as to civil liberties, involving development of the subcomponents social group equality, basic welfare and gender equality. Five V-Dem expert-coded indicators that reflect social equality are used to measure the first of the social rights and equality subcomponents. Four of the underlying questions ask about social class and identity group inequalities with regard to civil liberties and political power distribution, the fifth about the representation of disadvantaged social groups.

The provision of basic welfare is measured using a number of standard observable human development indicators: infant mortality rate (Gapminder), life expectancy (Gapminder), supply of kilocalories per person per day (FAO), literacy rate (UNESCO) and average years of schooling (GHDx). The data on literacy rates contained a lot of missing values so linear interpolation between observed data points was used to increase the coverage. The project generally refrained from using data sets with significant amounts of missing values. In the few cases where linear interpolation was used to fill some of the gaps, there were good theoretical and empirical reasons to expect them to be trended and not to fluctuate a great deal. Interpolation means that new data points are constructed for missing data points within the range of known data points.

In addition, two expert-based indicators from V-Dem were included to assess whether everyone in a given society has access to basic education and health care. All of these reflect the extent to which the basic needs of the population are being met.

Two expert-coded indicators from V-Dem, on power distribution by gender and female participation in civil society organizations, and three observational indicators, on the ratio of female to male mean years of schooling (GHDx), the proportion of lower chamber legislators who are female (V-Dem) and the percentage of women in ministerial level positions (IPU), were used to operationalize the last social rights and equality subattribute, gender equality. As the latter two indicators had a large number of missing values, linear interpolation between observed data points was used to fill some of the gaps.

Indicators for Attribute 3: Checks on Government

Effective Parliament
Three indicators from the V-Dem experts' survey tap fairly directly into the effectiveness of parliament. Another V-Dem indicator on executive oversight and the executive constraints indicator from Polity have a broader focus but are also included as they capture relevant aspects of institutional checks on government not covered by judicial independence and media integrity.

Judicial Independence
Since our framework places judicial independence under the attribute concerning checks on government, it was important to supplement the three judicial independence indicators from V-Dem and Linzer and Staton (2015) with two V-Dem indicators on government compliance with the courts. Since many cross-national data sets on judicial independence were used by Linzer and Staton to construct their composite measure, these are not used separately to construct the index.

Media Integrity
Media integrity and freedom of expression are related. Nonetheless, the media can do a poor job controlling the government even in a situation of media freedom if for other reasons than government repression they are very one-sided, uncritical, superficial or corrupt. V-Dem offers indicators that reflect these additional circumstances through the indicators on whether various media are critical, offer different perspectives, are biased or are corrupt. The indicators included are based on expert surveys. In addition, an in-house coded indicator from Whitten-Woodring and Van Bell evaluates whether the media are critical of the government and its officials.

Indicators for Attribute 4: Impartial Administration

Absence of Corruption
Although many data sets now provide indicators on corruption, only a few go back more than one or two decades or distinguish between different types of corruption. Four V-Dem indicators explicitly refer to corruption in the government as broadly understood; that is, the executive and public administration more generally but excluding the courts and parliament. These are used along with another expert-coded but broader indicator on government corruption from the ICRG data set.

Predictable Enforcement
To measure the related feature of predictable enforcement, three expert-coded V-Dem indicators on the executive's respect for constitutional provisions, the presence of transparent laws with predictable enforcement, and rule-abiding in the public sector are used. They stand out as the most relevant, together with an indicator from ICRG (also expert-coded), which assesses the strength and expertise of the bureaucracy. More directly observable indicators either have relatively low coverage (e.g. the World Bank's statistical capacity measure) or do not approximate the concept sufficiently (e.g. data on census frequency).

Indicators for Attribute 5: Participatory Engagement

Civil Society Participation
The measurement of civil society participation relies on two V-Dem indicators. These result from an expert survey and consider the extent to which the population is engaged in civil society activities. Unfortunately, potentially relevant indicators based on mass surveys, asking people about their actual involvement in civic activism, are hard to combine across surveys, which, moreover, have rather limited coverage in terms of years and countries.

Electoral Participation
The turnout of the voting age population in national elections is the single indicator used to capture electoral participation. This observational indicator from V-Dem, which is to a large extent based on initial data collection by International IDEA, captures the concept of interest in a direct way and one indicator is therefore sufficient to measure this subattribute—especially given that there are hardly any feasible alternatives.

Direct Democracy
The situation is even more pronounced in the case of direct democracy, where V-Dem offers the only comprehensive data set, which encompasses the direct democracy index developed by David Altman (2016). It is based on observable variables on the formal opportunities for and actual use of different instruments of direct democracy at the national level.

Subnational Elections
V-Dem is also the only provider of a large-scale, cross-national data set on subnational elections. Two in-house coded indicators were used on the presence of subnational elections at the regional and local level, respectively. In addition, two expert-coded variables were used on the relative power of the subnational units, on the one hand, and the central government, on the other, as well as one indicator assessing the freedom and fairness of any subnational elections.

3.4. Aggregation

Deciding on the rules for aggregating the selected indicators is another key issue of index construction. This is the stage where the theoretical links between attributes and subattributes, as well as between subattributes and indicators, are translated into corresponding aggregation formulas. This section addresses a number of issues related to the task of combining the selected indicators in ways that mirror the concepts of interest.

The GSoD framework is based on the assumption that the more the principles are fulfilled, the more democratic a political system is. Thus, the achievement of these principles—and each of the attributes and subattributes derived from them—is not conceived as an either/or matter, but rather as a matter of degree (cf. Collier and Adcock 1999). The measurement procedure used—that is, the construction of indices with relative, fine-grained scales with uncertainty estimates but without substantive thresholds—aligns better with this perspective than crisp distinctions.

Reflective and formative models

One of the most important questions to be asked in relation to combining different measures is whether a reflective or a formative aggregation model best captures the

relationships between the indicators and the concept of interest. These general aggregation models are conceptually and substantively different (Bollen and Lennox 1991; Coltman et al. 2008).

In a reflective model, the latent variable is understood as the common cause of the indicators used to measure it. Hence, causation runs from the latent concept to the indicators. Changes in the latent trait (not directly observed) are therefore expected to cause a change in the indicator scores, but not vice versa. In a reflective model, indicators are partially interchangeable. This means that leaving any of them out of the model should not have a major impact on the meaning of the concept of interest. To illustrate, different indicators of basic welfare provision, such as the infant mortality rate, life expectancy, literacy, kilocalories per person per day and mean years of schooling, would be expected to be highly correlated with and to reflect a common latent factor (i.e. basic welfare). Removing one indicator from the model is not likely to change the interpretation of the core concept too much.

The assumptions behind a formative model are different. A composite variable is posited as the summary of the relevant variation in a set of indicators that are understood as constitutive of a particular concept. In other words, a composite variable is composed of variables that are individually important for the meaning of the concept. In this case, causation flows from the indicators to the composite variable. In the formative model, the indicators are understood as definitional, meaning that excluding one or more of them will fundamentally alter the meaning of the concept that is to be captured. To illustrate, contestation (or competitive elections) and inclusive suffrage are often conceived as the two essential features of representative government (see Dahl 1989; Coppedge, Alvarez and Maldonado 2008). However, they are not necessarily highly correlated with each other. Today, many countries have universal adult suffrage but not much contestation and historically many countries had a high degree of contestation but highly restrictive voting rights. Moreover, only including indicators that capture either suffrage or contestation would critically alter the core concept that is being measured. Measuring one aspect cannot substitute for the measurement of the other aspect.

Both reflective aggregation models and formative aggregation models are used to combine the various indicators into composite GSoD indices. When indicators of the theoretical constructs are understood as reflecting a common underlying variable and/or generally show very high levels of covariation—as indicated by factor loadings above 0.6— the aggregation procedure chosen is IRT models, or Bayesian factor analysis (BFA). The distinction between formative and reflective indicators is not always easy to implement in practice and, arguably, in some cases formative indicators are treated as reflective indicators. However, in the case of very high correlations, the choice of aggregation rule generally makes less of a difference. Moreover, in many cases there is only a weak and inconsistent theoretical basis to inform the development of formative aggregation rules. Finally, the use of a similar (reflective) aggregation procedure for many of the indices reduces the complexity of the GSoD indices. More generally, the suggested aggregation rules are justifiable but not necessarily conclusive—and users of the GSoD data set will be able to aggregate the indicators and indices in different ways if they have alternative ideas on how to match the data with their concepts of interest.

IRT modelling is used at the lowest level of aggregation (the subattribute or subcomponent level) if there is a significant amount of missing data (more than 5 per cent) in any of the indicators used to reflect the concept in question. According to Pemstein et al. (2015: 30), 'The underpinnings of these measurement models are straightforward: they use patterns of cross-rater [cross-indicator] (dis)agreement to estimate variations in

reliability and systematic bias. In turn, these techniques make use of the bias and reliability estimates to adjust estimates of the latent—that is, only indirectly observed—concept'.

The use of IRT modelling techniques has a number of potential benefits. First, it allows the 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). The distribution of scores across indicators used to capture particular concepts in particular country–years provides valuable information on how much confidence can be had in each data point. If, for instance, there is a lot of disagreement between indicators about the credibility of national elections in a particular country–year, then the uncertainty about the point estimate will be high. Such uncertainty is reflected in the relatively large range of the confidence interval. (The confidence interval demarcates uncertainty as signified by the upper and lower bounds of the interval around the point estimate in which the measurement model places a fixed percentage of the probability mass for each country–year score.) Overlaps between confidence levels for index scores within a country over time or between countries at the same time indicate that the differences in point estimates are not significant. Caution is therefore required in interpreting such differences as substantial.

Second, 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. This is an important feature because although all the selected indicators have very good coverage and therefore overlap significantly, quite a few of them do not offer complete time series and/or do not cover all countries. The use of full information maximum likelihood IRT models means that all the relevant information from the indicators can be used. The gaps in some indicators are then reflected in the uncertainty estimates but if none of the indicators provide data for a given country–year, no estimate is calculated for this country–year. The latter also reflect the level of agreement between indicator scores—or the extent to which they are correlated.

On the specific type of IRT model to use, a number of different procedures have been proposed in the literature for similar situations. Pemstein, Melton and Meserve (2010) suggested one of the current options in connection with their computation of their Unified Democracy Scores (UDS)—a combination of many existing measures of democracy into a single, fine-grained estimate for each country, with uncertainty estimates. A similar option is proposed by Fariss (2014) and Fariss and Schankenberg (2014) in their work on Human Rights Protection Scores. Unfortunately, these models are highly demanding in terms of computational power. Indeed, as the authors note themselves, these kinds of models demand access to a supercomputer in order to construct just one index. A Bayesian IRT approach would therefore not be feasible given the time constraints and computational resources.

A related but much less demanding model was therefore used based on the multidimensional IRT approach implemented in the *mirt* package for the R statistical software by Philip Chalmers (2016). According to Chalmers (2016: 71), this 'fits an unconditional maximum likelihood factor analysis model to any mixture of dichotomous and polytomous data under the item response theory paradigm'.

Using *mirt* to compute the scores has a number of advantages. First, it can compute scores for all country years—even where there is incomplete overlap in the coverage of indicators—using the FIML (Full Information Maximum Likelihood) approach. Second, *mirt* computes standard errors for the scores, which allows the construction of confidence intervals around the estimates. Third, estimation via *mirt* is not too demanding in terms of computational power. It can be done on a desktop computer and does not require access to

specialized computing infrastructure. Thus, the indices are not only easier to construct but also easier to replicate. The *mirt* package has already been used to replicate UDS scores. The findings showed that scores computed using *mirt* are 'essentially identical to those produced by PMM's [Pemstein et al.] more sophisticated Bayesian procedure' (Marquez 2016: 4).

The IRT model requires that the indicators measured on an interval scale must be recoded using an ordinal scale. While this rescaling obviously led to some loss of information for some variables, all the IRT methods discussed above use the same approach to rescaling interval indicators. As Pemstein et al. (2010: 433; see also Marquardt and Pemstein 2017) emphasize, this procedure is both more conservative and more empirically valid.

As a rule-of-thumb, ordinal variables are used without recoding. Interval scale variables are recoded to ordinal scales using cut-offs at regular intervals (5 percentiles) on the original scales. In addition, in those cases where the category of an ordinal variable had less than 1 per cent of the observations, these observations are merged into an adjacent category. For further information on recoding see the Codebook (Tufis 2017a).

If there is virtually perfect overlap in the measures to be combined (due to there being few missing data points), BFA becomes a more viable option. Compared to the IRT models, this method generally has the advantage that the measures included do not have to be ordinal variables. This means that variation is not lost and that the estimates (factor scores) of the underlying concept are more fine-grained.

Factor analysis uses information about covariation patterns between indicators to collapse several correlated, observed indicators into fewer underlying variables called factors. Simply put, the resulting factors reduce complexity by capturing variation that is common to several observed variables. Sticking to the basic welfare example, information on infant mortality rates, life expectancy, literacy, kilocalories per person per day and mean years of schooling can be understood by a single factor because all the indicators reflect a common underlying phenomenon (as indicated by high factor loadings and bivariate correlation coefficients), which in this case can be interpreted as the general provision of basic welfare.

BFA, like IRT models, provides provide point estimates for the latent dimension as well as 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 showed low levels of missing data. Moreover, BFA was used to combine subcomponent scores with subattribute scores and thereafter subattribute scores with attribute scores when applicable; that is, if the measures were expected to reflect the same latent concept in the framework and when the indicators/indices to be aggregated showed strong correlations.

When indicators are understood as constitutive components of the concept of interest, the indicators are not necessarily expected to be highly correlated, which makes the use of a formative approach more plausible. In such cases, the aggregation procedure should be based on the answers to at least two questions. The first concerns whether the attributes (or subattributes) interact. If not, then a high score on one attribute is insulated from a low score on another. If they do, then a low score on one attribute tends to drag down the score of the other. The second question concerns whether the attributes are substitutable. If so, then a low score on one can be compensated for by a high score on the other, although this should not be allowed in the case of a non-compensatory relationship. A middle option in the form of partial substitutability is also a possibility (Munck 2009: 70–71). Two formative models were used in the GSoD framework where it was judged that a particular version of this procedure was more appropriate than purely reflective procedures. Hence, a formative model is used to combine the contestation index with an inclusiveness indicator to create the representative government index; and a formative model is used to aggregate indicators related to the presence and the freeness and fairness of subnational elections.

Aggregation of indicators into GSoD indices

Many of the selected indicators are expected to cluster in meaningful ways and to tap into a limited number of overarching concepts. These expectations rest on theoretical grounds and the findings of previous dimensionality analyses of these and related indicators, which show that many of them are highly correlated and reflect common latent attributes (see e.g. Skaaning 2009; Møller and Skaaning 2014a, 2014b; Teorell et al. 2016). An independent assessment of empirical dimensionality was implemented by correlating the indicators selected to capture the respective subattributes (or subcomponents in relation to civil liberties and social rights) and run BFAs of the same groups of indicators.

Cronbach's Alpha (CA) coefficients were calculated to assess scale reliability, or how closely related (internally consistent) a set of indicators is as a group. Both the bivariate correlations and the factor loadings were generally very high and thus, where this was expected, supported the indicators' reflected common latent attributes. Moreover, all the CA values indicated very strong scalability (see Annex D). Indicators with factor loadings lower than 0.6 were generally not included. In addition, indicators were not combined into an index if the CA value was lower than .8. Any exceptions to these criteria are explicitly mentioned in the main text.

Representative Government

Beginning with the first subattribute of representative government, clean elections, the indicators are very highly correlated and CA is .97. Since there are no significant missing data in any of the indicators, BFA was used to aggregate them. In a final step, all the country–years without an electoral regime, according to V-Dem, received the minimum value 0. (This procedure is only applied in cases where the LIED competition indicator is also 0.) The party freedom indicators also showed a high scalability coefficient (.96) but as they are characterized by significant gaps (in the NELDA and Polity indicators), IRT modelling was used in this case. The elected government indicators showed somewhat weaker unidimensionality than the other subattribute indices as the Polity indicators are somewhat out of sync with each other and the other indicators—as indicated by their factor loadings of .53 and .60. Nonetheless, they were kept in order to produce a more nuanced index. Moreover, the factor loadings indicated that a reflective model is reasonable given the high conceptual overlap among the indicators, and CA is still .86. Missing data in the Polity indicators meant that, once again, IRT modelling was used to aggregate the relevant indicators. Since a single indicator was selected for inclusive elections, this subattribute does not need any aggregation.

The suffrage indicator was combined with the three other 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 (1971; 1989; see also Coppedge, Alvarez and Maldonado 2008; Miller 2015) theoretical distinction between two attributes of representative government—contestation and inclusion—a first step uses the factor scores from a BFA to construct a contestation index (CA=.93). Thereafter, a formative aggregation procedure combines the contestation index with the inclusive suffrage measure. Although contestation and inclusion are not highly correlated, they are both necessary preconditions 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

All the indicators linked to access to justice show strong unidimensionality and scalability (CA=.92). Since none of the indicators have significant missing data, the indicators were combined using BFA. Regarding the second subattribute of fundamental rights, civil liberties, the indicators for freedom of expression, freedom of assembly and association, freedom of religion, freedom of movement, and personal integrity and security are highly correlated and express high scalability (CA=.90–.98). The V-Dem indicators and the CLD indicators have near to full coverage so the first four subcomponent indices were constructed using BFA. However, the ICRG conflict indicator has a significant proportion of missing observations. The personal integrity and security subcomponent index was therefore constructed using IRT modelling.

In the next step BFA was used to reduce the highly correlated subcomponents into a single index score for the civil liberties subattribute (CA=.96). All the indicators on social group equality had high factor loadings, although the representation of disadvantaged social groups was a partial exception with its factor loading of .57. Due to the gaps in this indicator, which is considered too valuable to exclude because it captures an important aspect not sufficiently captured by the other indicators, IRT was used to construct the social group equality index (CA=.87).

The indicators linked to basic welfare also turned out to reflect a common underlying attribute and strong scalability (CA=.93). Thus, they were aggregated using a reflective model. More specifically, an IRT model was used because the literacy indicator in particular had a relatively high number of missing observations.

Some of the gender equality indicators, primarily those on female representation in parliament and the cabinet, had similarly significant gaps. These indicators showed relatively low factor loadings of .60 and .61, respectively. Nonetheless, they tap into highly relevant features and the CA was still .82, so they were all used to construct the gender equality index using the IRT model.

The indices for social group equality, gender equality and basic welfare showed a very high CA coefficient (.96). They were combined into an overall social rights and equality index using BFA. An even higher covariation was found between the three fundamental rights subcomponents (factor loadings of between .83 and .94). Against this backdrop, and the widespread understanding that these core human rights go hand-in-hand—as stated in the Vienna Declaration (UN Office of the High Commissioner for Human Rights 1993; see also Whelan 2010)— BFA was used to create a fundamental rights index (CA=.92).

Checks on Government

The association between indicators related to the different checks on government subattributes is also impressive: the lowest bivariate correlation was .69 and the lowest factor loading .75. Three reflective indices were constructed: on effective parliament: (CA=.95), judicial independence (CA=.95) and media integrity (CA=.96).). IRT was used in the first two cases, due to significant missing data in some of the indicators. BFA was used in the latter case. To reduce missing data for the effective parliament index, a score of 0 was awarded where there was no legislature according to the IAEP data set (Wig, Hegre and Regan 2015). These indices were then aggregated into a more general index using BFA, as they tend to reflect a common underlying attribute which is interpreted as checks on government (CA=.93).

Impartial Administration

The unidimensionality of the indicators grouped with absence of corruption and predictable enforcement was somewhat less pronounced—especially due to the lower correlations between the V-Dem indicators, on the one hand, and the indicators provided by the ICRG, on the other. Nonetheless, all the factor loadings are still at least .71 and the respective scalability values for the indices are .95 and .92. Since the ICRG indicators have substantial deficiencies in coverage, the two indices were created using IRT modelling. These indices capture closely related concepts so it is no big surprise that they show a strong association. Hence, an impartial administration index was constructed based on BFA scores (CA=.91).

Participatory Engagement

With regard to the participatory engagement subattributes, no aggregation was needed for direct democracy (since an already carefully constructed index is being used and there are no viable alternatives) or for electoral participation (since only one indicator is being used).

The two indicators on civil society participation clearly tapped into a common attribute. Since the indicators have almost perfect overlap, they were aggregated into an index (CA=.88) based on BFA.

It was less straightforward to create an index of the indicators capturing different aspects of subnational elections. A formative aggregation formula was used that takes account of the reinforcing relationship between the mere existence of subnational elections and their freeness and fairness. Accordingly, a measure of free local elections was constructed by multiplying the indicators on elected local government and free and fair subnational elections; and a measure of free regional level elections was constructed by multiplying the indicators on elected regional governments and free and fair subnational elections. Since free elections at the local level can be considered partially substitutable with free elections at the regional level, the aggregation was completed by taking the average of these products.

While there is relatively good theoretical guidance and a large degree of empirical unidimensionality to rely on when aggregating subattribute scores for the other attributes, the relationship between the subattributes and the overarching attribute is less evident for participatory engagement. Furthermore, the subattribute indices linked to this attribute are not highly correlated. This may reflect the fact that they capture rather distinct phenomena, although they are all conceptually related by being expressions of popular participation. Hence, aggregation through reflective models does not seem to be a plausible solution. As it is also not clear from extant theory whether the different aspects of popular participation stand in an interactive and/or substitutable relationship with each other, aggregation to the attribute level was not attempted. Users are urged to do the same and use the subattribute indices.

Summary

Table 3.2 summarizes the aggregation procedures used in the construction of indices at the different levels. All the indices at the different levels have been normalized to range from 0 (lowest achievement) to 1 (highest achievement). A score of 0 refers to the worst performance in the entire sample of country–years covered by a particular index, while a score of 1 refers to the best country–year performance in the sample. For a number of indices, however, 0 has an absolute meaning in addition to a relative meaning. The suffrage index and the voter turnout index have substantively meaningful minimums and maximums. More particularly, 0 refers to the full absence of inclusive suffrage or voter turnout, while 1 refers to universal adult suffrage and 100 per cent voter turnout. The

subattribute indices capturing clean elections, elected government, direct democracy and subnational elections also have substantively meaningful minimum values that refer to agreement between all the indicators about the total absence of their respective features.

TABLE 3.2.

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	NA (only one indicator)
			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 or Bayesian factor analysis by subcomponents (i.e. freedom of expression [BFA], freedom of association and assembly [BFA], freedom of religion [BFA], freedom of movement [BFA], and personal integrity and security [IRT]). Thereafter, Bayesian factor analysis of subcomponent indices.
			2.3 Social Rights and Equality	First item response modelling by subcomponents (i.e. social group equality, gender equality, and basic welfare). Thereafter, Bayesian factor analysis of subcomponent indices.
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)	NA (no obvious way to combine the multi-dimensional subattributes)	5.1 Civil Society Participation	Bayesian factor analysis
			5.2 Electoral Participation	NA (only one indicator)
			5.3 Direct Democracy	NA (only one indicator)
			5.4 Subnational Elections	Multiplication of indicators related to regional elections and local elections, respectively. Thereafter, the scores for the two levels are averaged.

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 are in the form of confidence intervals (margins of error) and 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 indices based on multiple indicators. The more the underlying indicators are in agreement regarding the scoring (high-low) on a particular aspect of democracy, the narrower the confidence levels are. If the confidence levels overlap when comparing the scores for two or more countries on the same GSoD 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 indicate that the difference is statistically insignificant. More generally, short-term fluctuations—especially very recent ones—are hard to capture well and should be interpreted with caution, while it is usually possible to be certain about longer-term trends.

4. The Global State of Democracy indices in comparison with extant measures

This chapter presents a brief comparison with existing measures that attempt to capture relatively similar aspects of democracy at the attribute, subattribute or subcomponent levels (see Coppedge et al. 2016b; Skaaning 2017). For detailed evaluations of the advantages and disadvantages of these data sets see, among others, Arndt and Oman (2006), Coppedge et al. (2011), Landman and Carvalho (2009), Møller and Skaaning (2014a), Munck (2009), OHCHR (2012) and Skaaning (2009).

These measures are taken from nine large-scale data sets on democracy, governance and human rights (see Table 4.1).

TABLE 4.1.

Measures on democracy, governance or human rights

Measure	Reference
Bertelsmann Stiftung Bertelsmann Transformation Index (BTI)	‹https://www.bti-roject.org/en/home/›
Cingranelli-Richards (CIRI) Human Rights Database	‹http://www.humanrightsdata.com/›
Economist Intelligence Unit (EIU) Democracy Index	‹http://www.eiu.com/topic/democracy-index›
Freedom House Freedom in the World survey	‹https://freedomhouse.org/report-types/freedom-world›
Electoral Integrity Project Perception of Electoral Integrity (PEI) data	‹https://www.electoralintegrityproject.com/›
Marshall, Gurr and Jaggers' Polity IV data	‹http://www.systemicpeace.org/polityproject.html›
Kaufmann and Kray's Worldwide Governance Indicators (WGI)	‹http://info.worldbank.org/governance/wgi/#home›
Varieties of Democracy (V-Dem) index	‹https://www.v-dem.net/en/›
World Justice Project (WJP) Rule of Law Index	‹https://worldjusticeproject.org/our-work/wjp-rule-law-index›

Compared to the GSoD indices, it is clear from Table 4.2 that the information provided is quite similar, in terms of the coverage, to CIRI and Freedom House; and that Polity and V-Dem cover substantively more years. The other data sets in the overview do not go back to the beginning of the third wave of democratization or even the end of the Cold War, however, which makes their ability to capture trends rather limited.

TABLE 4.2.

Selected characteristics of 10 large-scale democracy, governance or human rights data sets

Data set	Years covered	Type of source				Based on indicators from various data providers	Uncertainty estimates	Scale
		IC	OD	ES	PS			
International IDEA: GSoD indices	1975–2015	X	X	X		Yes	Yes	Interval
Bertelsmann Stiftung: Bertelsmann Transformation Index	2003–2015 (biennial)			X		No	No	Ordinal
Cingranelli-Richards (CIRI) Human Rights Database	1981–2011	X				No	No	Ordinal
Electoral Integrity Project: Perceptions of Electoral Integrity	2012–2016			X		No	Yes	Interval
Economist Intelligence Unit: Democracy Index	2006, 2008, 2010–2016			X	X	Yes	No	Interval
Freedom House: Freedom in the World	1972–2016			X		No	No	Ordinal
Marshall, Jaggers and Gurr: Polity IV	1800–2015	X				No	No	Ordinal
V-Dem Project: V-Dem data set	1900–2016	X	X	X		No	Yes	Interval
Kaufmann and Kray: Worldwide Governance Indicators (WGI)	1996, 1998, 2000–15	X	X	X	X	Yes	Yes	Interval
World Justice Project (WJP): Rule of Law Index	2012–16			X	X	No	No	Interval

Note: IC = in-house coding; OD = Observational data; ES = Expert surveys; PS = Public opinion surveys.

The overview also demonstrates considerable variation in the kind of data sources on which the data sets are based. Half of them only use one type—either in-house coded indicators or expert surveys—while the others use two, three or even four types. Expert surveys are used most and public opinion surveys least. With three exceptions, the data sets rely on indicators from just a single data provider: their own data collection. In addition, far from all of them complement their scores with uncertainty estimates, although all of them at least partly rely on judgment-based data collection procedures.

On the listed parameters, the GSoD measures are most similar to the V-Dem measures, as they are based on in-house coded and expert-coded data as well as observational data but not public opinion surveys; and they provide fine-grained scores that are supplemented by uncertainty estimates. The major difference is that V-Dem builds on its own original data collection, whereas the GSoD indices make use of extant indicators from various data providers.

It is standard practice to evaluate new measures by correlating them with other, more established measures. Annex E reports the bivariate covariation between the GSoD indices (at all levels of aggregation) and extant measures from the data sets listed above that are

supposed to capture identical or at least similar concepts. If the extant measures are valid, high correlations indicate that the GSoD indices are also valid. If the extant measures are based on similar or the same information, high correlations also indicate that the GSoD indices are reliable. Almost all the correlations are either high or very high (above .7). The CIRI measures tend to be somewhat more out of sync with the GSoD indices than the other alternatives. However, all the correlations, including the high ones, 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.

5. Cautionary notes

The GSoD indices can be used to assess cross-country differences and similarities and to identify trends at the country, regional and global levels over time. Users are advised not to collapse the scores for the individual attributes into one single democracy index as a disaggregated perspective provides more nuanced information.

It is not recommended that the indices be used to carry out impact assessments of specific policy reforms or democracy promotion initiatives. Despite disaggregation, they are often too abstract to be useful for suggesting concrete policy reforms, which should rather be informed by detailed and context-specific evaluations of opportunities and constraints. In relation to the main data sources that the GSoD indices draw on, the release of version 7 of the V-Dem data (2017) was followed by a cautionary note: 'With the updates covering 2013–2016, it has for a few country-variable combinations been impossible to achieve that target [at least five country experts per country-indicator]. At times, the result is significant changes in point estimates as a consequence of self-selected attrition of Country Experts, rather than actual changes in the country'. Moreover, 'identifiers for the main country coded by 11.7% of experts were incorrectly assigned … this issue has likely reduced cross-national comparability to an unclear extent' (V-Dem 2017).

Therefore, caution should be exercised when drawing conclusions for the period 2013–15 using the GSoD indices that rely heavily on data from the V-Dem expert survey.

In practice, this problem tends to be more pronounced for democracies in North America and North and West Europe, where the scores for some indicators and countries have tended to be dragged down towards the global mean for methodological rather than substantial reasons. Conclusions should not be drawn concerning North American and West European countries based on small dips in some of the indices at the very end of the period covered (2012–15) alone. Although these changes are generally not statistically significant, they could signal a downward trend but they could also be a methodological artefact.

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Annex A

The GSoD conceptual framework and predominant conceptions of democracy: a general overview of overlaps

	Attribute	Subattribute		Electoral democracy	Liberal democracy	Social democracy	Participatory democracy
1	**Representative Government** (free and equal access to political power)	1.1. Clean Elections		X	X	X	X
		1.2. Inclusive Suffrage		X	X	X	X
		1.3. Free Political Parties		X	X	X	X
		1.4. Elected Government		X	X	X	X
2	**Fundamental Rights** (individual liberties and resources)	2.1. Access to Justice			X	X	X
		2.2. Civil Liberties	2.2.1. Freedom of Expression		X	X	X
			2.2.2. Freedom of Association and Assembly		X	X	X
			2.2.3. Freedom of Religion		X	X	X
			2.2.4. Freedom of Movement		X	X	X
			2.2.5. Personal Integrity and Security		X	X	X
		2.3. Social Rights and Equality	2.3.1. Social Group Equality			X	
			2.3.2. Gender Equality			X	
			2.3.3. Basic Welfare			X	
3	**Checks on Government** (effective control of executive power)	3.1. Effective Parliament			X	X	
		3.2. Judicial Independence			X	X	
		3.3. Media Integrity			X	X	
4	**Impartial Administration** (fair and predictable public administration)	4.1. Absence of Corruption			X	X	
		4.2. Predictable Enforcement			X	X	
5	**Participatory Engagement** (instruments for and realization of political involvement)	5.1. Civil Society Participation					X
		5.2. Electoral Participation					X
		5.3. Direct Democracy					X
		5.4. Subnational Elections					X

Annex B

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	Election voter registry
			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
	1.3. Free Political Parties	To what extent are political parties free to form and campaign for office?	1.3.1	Party ban
			1.3.2	Barriers to parties
			1.3.3	Opposition parties' autonomy
			1.3.4	Elections multiparty
			1.3.5	Competitiveness of participation
			1.3.6	Multiparty elections
			1.3.7	Was opposition allowed?
			1.3.8	Was more than one party legal?
			1.3.9	Were opposition leaders prevented from running?
	1.4. Elected Government	To what extent is access to government determined by elections?	1.4.1	Elected executive index
			1.4.2	Competitiveness of executive recruitment
			1.4.3	Openness of executive recruitment
			1.4.4	Legislative elections
			1.4.5	Executive elections
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?	**Subcomponent 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

Attributes	Subattributes	Assessment questions	No.	Indicators
			Subcomponent 2.2.B: Freedom of Association and Assembly	
			2.2.8	CSO entry and exit
			2.2.9	CSO repression
			2.2.10	Freedom of assembly and association
			Subcomponent 2.2.C: Freedom of Religion	
			2.2.11	Freedom of religion
			2.2.12	Religious organization repression
			2.2.13	Freedom of thought, conscience and religion
			Subcomponent 2.2.D: Freedom of Movement	
	2.2. Civil Liberties	To what extent are civil liberties respected?	2.2.14	Freedom of foreign movement
			2.2.15	Freedom of domestic movement for women
			2.2.16	Freedom of domestic movement for men
			2.2.17	Freedom of movement and residence
			Subcomponent 2.2.E: Personal Integrity and Security	
			2.2.18	Freedom from forced labour for women
			2.2.19	Freedom from forced labour for men
			2.2.20	Freedom from torture
			2.2.21	Freedom from political killings
2. Fundamental Rights			2.2.22	Human rights protection scores
			2.2.23	Internal conflict
			Subcomponent 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
			Subcomponent 2.3.B: Basic Welfare	
			2.3.6	Infant mortality rate
			2.3.7	Life expectancy
			2.3.8	Kilocalories per person per day
	2.3. Social Rights and Equality	To what extent are basic welfare and social and political equality realized?	2.3.9	Literacy
			2.3.10	Mean years of schooling
			2.3.11	Educational equality
			2.3.12	Health equality
			Subcomponent 2.3.C: Gender Equality	
			2.3.13	Power distributed by gender
			2.3.14	CSO women's participation
			2.3.15	Female vs. male mean years of schooling
			2.3.16	Lower chamber female legislators
			2.3.17	Proportion of women in ministerial level positions

Attributes	Subattributes	Assessment questions	No.	Indicators
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 High Court
			3.2.4	Compliance with judiciary
			3.2.5	Latent judicial independence
	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	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
	5.2. Electoral Participation	To what extent do people participate in national elections?	5.2.1	Election voting age population (VAP) turnout
	5.3. Direct Democracy	To what extent are mechanisms of direct democracy available and used?	5.3.1	Direct popular vote index
	5.4. Subnational Elections	To what extent are there free regional and local elections?	5.4.1	Local government elected
			5.4.2	Regional government elected
			5.4.3	Subnational elections free and fair

Annex C

Overview of indicators and sources

No.	Indicator	Description / question	Data set
1. Representative Government (free and equal access to political power)			
1.1. Indicators of Clean Elections			
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	Election voter registry (v2elrgstry)	ES: In this national election, was there a reasonably accurate voter registry in place and was it used?	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 it were to attract sufficient support from the electorate.	LIED
1.2. Indicators of Inclusive Suffrage			
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
1.3. Indicators of Free Political Parties			
1.3.1	Party ban (v2psparban)	ES: Are any political 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)	IC: The lower house (or unicameral chamber) of the legislature is (at least in part) elected by voters faced with more than one choice. Specifically, parties are not banned and more than one party is allowed to compete or elections are non-partisan (i.e. all candidates run without party labels).	LIED
1.3.7	Was opposition allowed? (NELDA 3)	IC: At least one opposition political party existed to contest the election.	NELDA
1.3.8	Was more than one party legal? (NELDA 4)	IC: Multiple political parties were technically legal	NELDA
1.3.9	Were opposition leaders prevented from running? (NELDA 13)	IC: At least some opposition leaders were prevented from running and contesting the elections; a decision to boycott the election if in response to the government preventing opposition figures from running; or opposition was not allowed.	NELDA

No.	Indicator	Description / question	Data set
1.4. Indicators of Elected Government			
1.4.1	Elected executive index (v2x_accex)	CM: Measure based on 12 variables from the V-Dem expert survey, in-house coding and observational data collected by V-Dem.[1]	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	Legislative elections (legislative elections)	IC: A legislative body issues at least some laws and does not perform executive functions. The lower house (or unicameral chamber) of the legislature is at least partly elected. The legislature has not been closed.	LIED
1.4.5	Executive elections (executive elections)	IC: The chief executive is either directly or indirectly elected (i.e. chosen by people who have been elected).	LIED
2. Fundamental Rights (individual liberties and resources)			
2.1. Indicators of Access to Justice			
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 they are entitled to trial without undue delay if arrested, detained or charged with a criminal offence.	CLD
2.2. Indicators of Civil Liberties			
2.2.A. 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; that is, 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
2.2.7	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 press to hold views freely and to seek, obtain and pass on information on political issues as broadly understood without being subject to actual limitations or restrictions.	CLD

No.	Indicator	Description / question	Data set
2.2.B. Freedom of Association and Assembly			
2.2.8	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
2.2.9	CSO repression (v2csreprss)	ES: Does the government attempt to repress civil society organizations?	V-Dem
2.2.10	Freedom of assembly and association (freass)	IC: The extent to which individuals and groups have freedom of assembly and association, that is, the right of 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 limitations or restrictions.	CLD
2.2.C. Freedom of Religion			
2.2.11	Freedom of religion (v2clrelig)	ES: Is there freedom of religion?	V-Dem
2.2.12	Religious organization repression (v2csrlgrep)	ES: Does the government attempt to repress religious organizations?	V-Dem
2.2.13	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 the citizens to have and change their religion or belief of choice; and alone or in community manifest their religion or belief in practice, worship, observance and teaching, in private or public, as well as to proselytize peacefully without being subject to limitations or restrictions.	CLD
2.2.D. Freedom of Movement			
2.2.14	Freedom of foreign movement (v2clfmove)	ES: Is there freedom of foreign travel and emigration?	V-Dem
2.2.15	Freedom of domestic movement for women (v2cldmovew)	ES: Do women enjoy freedom of movement within the country?	V-Dem
2.2.16	Freedom of domestic movement for men (v2cldmovem)	ES: Do men enjoy freedom of movement within the country?	V-Dem
2.2.17	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 in their country as well as to leave and return to their country of their own volition without being subject to limitations or restrictions.	CLD
2.2.E. Personal Integrity and Security			
2.2.18	Freedom from forced labour for women (v2clslavef)	ES: Are adult women free from servitude and other kinds of forced labour?	V-Dem
2.2.19	Freedom from forced labour for men (v2clslavem)	ES: Are adult men free from servitude and other kinds of forced labour?	V-Dem
2.2.20	Freedom from torture (v2cltort)	ES: Is there freedom from torture?	V-Dem
2.2.21	Freedom from political killings (v2clkill)	ES: Is there freedom from political killings?	V-Dem
2.2.22	Human rights protection scores	Measure based on 13 in-house coded variables from nine different data sets.[2]	Fariss
2.2.23	Internal conflict (D)	ES: Is there political violence in the country? The rating assigned is the sum of three subcomponents: civil war/coup threat, terrorism/political violence and civil disorder	ICRG

No.	Indicator	Description / question	Data set
2.3. Indicators of Social Rights and Equality			
2.3.A. 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 do?	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.B. Basic Welfare			
2.3.6	Infant mortality rate	OD	Gapminder
2.3.7	Life expectancy	OD	Gapminder
2.3.8	Kilocalories per person per day	OD	FAO
2.3.9	Literacy	OD	UNESCO
2.3.10	Mean years of schooling	OD	GHDx
2.3.11	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
2.3.12	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
2.3.C. Gender Equality			
2.3.13	Power distributed by gender (v2pepwrgen)	ES: Is political power distributed according to gender?	V-Dem
2.3.14	CSO women's participation (v2csgender)	ES: Are women prevented from participating in civil society organizations?	V-Dem
2.3.15	Female vs. male mean years of schooling	OD	GHDx
2.3.16	Lower chamber female legislators (v2lgfemleg)	OD	V-Dem
2.3.17	Proportion of women in ministerial level positions	OD	IPU

No.	Indicator	Description / question	Data set
3. Checks on Government (effective control of executive power)			
3.1. Indicators of Effective Parliament			
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
3.2. Indicators of Judicial Independence			
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	Latent judicial independence	CM: Measure based on seven in-house coded variables and one observational variable from eight different data sets.[3]	Linzer / Staton
3.3. Indicators of Media Integrity			
3.3.1	Print/broadcast media critical (v2mecrit)	ES: Of the major print and broadcast media 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

No.	Indicator	Description / question	Data set
4. Impartial Administration (fair and predictable public administration)			
4.1. Indicators of Absence of Corruption			
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, 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 and suspiciously close ties between politics and business?	ICRG
4.2. Indicators of Predictable Enforcement			
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	Bureaucratic quality (L)	ES: Bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services.	ICRG
5. Participatory Engagement (instruments for and realization of political involvement)			
5.1. Indicators of Civil Society Participation			
5.1.1	CSO participatory environment (v2csprtcpt)	ES: Are people involved in civil society organizations (CSOs)?	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
5.2. Indicators of Electoral Participation			
5.2.1	Election: VAP turnout (v2elvaptrn)	OD	V-Dem
5.3. Indicators of Direct Democracy			
5.3.1	Direct popular vote index (v2xdd_dd)	CM: Measure based on 12 observable variables from V-Dem. It results from the combination of scores for each type of popular vote (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 time limits 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

No.	Indicator	Description / question	Data set
5.4. Indicators of Subnational Elections			
5.4.1	Local government elected (v2ellocelc)	IC: At the local level, are government (local government) offices elected in practice?	V-Dem
5.4.2	Regional government elected (v2elsrgel)	IC: At the regional level, are government offices elected in practice?	V-Dem
5.4.3	Subnational elections free and fair (v2elffelr)	ES: Taking all aspects of the pre-election period, election day and the post-election process into account, would you consider subnational elections (regional and local, as previously identified) to be free and fair on average?	V-Dem

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

[1] The 15 variables are: legislature closed down or aborted, lower chamber elected, upper chamber elected, legislature dominant 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 also head of government, chief executive appointment by upper chamber explicit approval, chief executive appointment by upper chamber.

[2] The nine data sets are: the CIRI physical integrity data (extrajudicial killings, disappearances, torture, political imprisonment) (Cingranelli and Richards 2014); Hathaway torture data (Hathawa, 2002); Ill-treatment and Torture(Conrad et al 2013); Political Terror Scale (Gilby and Dalton 1996); Mass-repression (Harff and Gurr 1998); Political Instability Task Force (PITF) (Marshal et al 2017); (PITF); Genocide and Democide (Rummel 1994a and 1994b); Uppsala Conflict Data Program One-sided Killing)(Sundberg 2009) (UCDP); World Handbook of Political and Social Indicators (Political Executions) (WHPSI)Taylor and Jodice 1983).

[3] The variables are de facto judicial independence (Feld and Voigt 2003; Gwartney and Lawson 2007; Keith 2012; Howard and Carey 2004; Cingranelli and Richards 2014), contract intensive money (Clauge et al 1999), constraints on the executive (Marshall et al 2016) and law and order (Howell 2011).

Annex D

Dimensionality tests

This Annex presents the results of assessments of the empirical dimensionality of the indicators selected to capture latent theoretical concepts at the subattribute level and, for civil liberties and social rights, also at the subcomponent level. This was done with the help of Bayesian factor analysis. For each model, the first 5000 iterations of the chain were discarded and the procedure continued with 105,000 iterations. By saving each 100th iteration of the chain, the analysis ended up with a data set of 1050 estimates for the parameters of interest in the models. As a general strategy, the Bayesian factor analysis models asked only for a single factor. Two-factor (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. Cronbach's Alpha (CA), a measure of scalability, was also calculated. To inform the choices of which indicators to use and how to aggregate them, the pairwise bivariate correlation coefficients (Pearson's r) were calculated for each cluster of indicators, which were combined into indices. 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.

D.1. 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	0.947	0.000	0.103	0.000	.845
1.3	Free Political Parties	-0.944	0.000	0.111	0.000	.880
1.4	Elected Officials	-0.837	0.000	0.299	0.000	.926
						Cronbach's alpha = .934

1.1. Clean Elections

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.1.1	EMB autonomy	-0.948	0.000	0.102	0.000	.930
1.1.2	Election voter registry	-0.887	0.000	0.214	0.000	.939
1.1.3	Election other voting irregularities	-0.879	0.000	0.228	0.000	.939
1.1.4	Election government intimidation	-0.963	0.000	0.074	0.000	.933
1.1.5	Election free and fair	-0.980	0.000	0.041	0.000	.928
1.1.6	Competition	-0.812	0.000	0.341	0.000	.971
						Cronbach's alpha = .967

1.3. Free Political Parties

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.3.1	Party ban	-0.843	0.000	0.291	0.000	.954
1.3.2	Barriers to parties	-0.888	0.000	0.213	0.000	.952
1.3.3	Opposition parties' autonomy	-0.874	0.000	0.239	0.000	.953
1.3.4	Elections multiparty	-0.898	0.000	0.196	0.000	.951
1.3.5	Competitiveness of participation	-0.867	0.000	0.249	0.000	.953
1.3.6	Multiparty elections	-0.860	0.000	0.261	0.000	.951
1.3.7	Was opposition allowed?	-0.842	0.000	0.292	0.000	.951
1.3.8	Was more than one party legal?	-0.860	0.000	0.262	0.000	.950
1.3.9	Were opposition leaders prevented from running?	-0.824	0.000	0.323	0.000	.954
						Cronbach's alpha = .963

1.4. Elected Government

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
1.4.1	Elected executive index	-0.803	0.000	0.357	0.000	.803
1.4.2	Competitiveness of executive recruitment	-0.569	0.000	0.676	0.000	.854
1.4.3	Openness of executive recruitment	-0.639	0.000	0.592	0.000	.834
1.4.4	Legislative elections	-0.781	0.000	0.390	0.000	.828
1.4.5	Executive elections	-0.907	0.000	0.179	0.000	.796
						Cronbach's alpha = .860

Attribute 2: Fundamental Rights

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.1	Access to Justice	-0.944	0.000	0.109	0.000	.847
2.2	Civil Liberties	0.909	0.000	0.174	0.000	.878
2.3	Social Rights	0.829	0.000	0.311	0.000	.916
						Cronbach's alpha = .922

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	0.041	0.000	.880
2.1.2	Access to justice for women	0.960	0.000	0.080	0.000	.883
2.1.3	Judicial corruption decision	0.675	0.000	0.545	0.000	.899
2.1.4	Judicial accountability	0.638	0.000	0.593	0.000	.910
2.1.5	Fair trial	0.856	0.000	0.268	0.000	.892
						Cronbach's alpha = .924

2.2. Civil Liberties

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.A	Freedom of expression	0.984	0.000	0.032	0.000	.937
2.2.B	Freedom of association and assembly	0.956	0.000	0.086	0.000	.943
2.2.C	Freedom of religion	0.853	0.000	0.272	0.000	.954
2.2.D	Freedom of movement	0.892	0.000	0.205	0.000	.949
2.2.E	Personal integrity and security	-0.865	0.000	0.253	0.000	.957
						Cronbach's alpha = .961

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	-0.938	0.000	0.120	0.000	.966
2.2.2	Harassment of journalists	-0.920	0.000	0.154	0.000	.968
2.2.3	Media self-censorship	-0.912	0.000	0.170	0.000	.969
2.2.4	Freedom of discussion for women	-0.960	0.000	0.079	0.000	.967
2.2.5	Freedom of discussion for men	-0.963	0.000	0.074	0.000	.967
2.2.6	Freedom of academic and cultural expression	-0.926	0.000	0.143	0.000	.969
2.2.7	Freedom of opinion and expression	-0.860	0.000	0.261	0.000	.977
						Cronbach's alpha = .977

2.2.B. Freedom of association and assembly

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.8	CSO entry and exit	-0.959	0.000	0.080	0.000	.854
2.2.9	CSO repression	-0.933	0.000	0.130	0.000	.874
2.2.10	Freedom of assembly and association	-0.867	0.000	0.249	0.000	.944
						Cronbach's alpha = .942

2.2.C. Freedom of religion

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.11	Freedom of religion	-0.935	0.000	0.126	0.000	.804
2.2.12	Religious organization repression	-0.885	0.000	0.217	0.000	.833
2.2.13	Freedom of thought, conscience and religion	-0.786	0.000	0.383	0.000	.905
						Cronbach's alpha = .901

2.2.D. Freedom of movement

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.14	Freedom of foreign movement	-0.900	0.000	0.190	0.000	.855
2.2.15	Freedom of domestic movement for women	-0.891	0.000	0.205	0.000	.873
2.2.16	Freedom of domestic movement for men	-0.907	0.000	0.176	0.000	.872
2.2.17	Freedom of movement and residence	-0.784	0.000	0.385	0.000	.924
						Cronbach's alpha = .926

2.2.E. Personal integrity and security

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.2.18	Freedom from forced labour for women	0.717	0.000	0.488	0.000	.903
2.2.19	Freedom from forced labour for men	0.682	0.000	0.537	0.000	.908
2.2.20	Freedom from torture	0.938	0.000	0.123	0.000	.891
2.2.21	Freedom from political killings	0.956	0.000	0.088	0.000	.888
2.2.22	Human rights protection scores	0.848	0.000	0.282	0.000	.894
2.2.23	Internal conflict	0.634	0.000	0.598	0.000	.924
						Cronbach's alpha = .918

2.3. Social Rights and Equality

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.A	Social group equality	-0.796	0.000	0.367	0.000	.787
2.3.B	Basic welfare	-0.752	0.000	0.434	0.000	.818
2.3.C	Gender equality	-0.871	0.000	0.242	0.000	.746
						Cronbach's alpha = .847

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	-0.888	0.000	0.212	0.000	.820
2.3.2	Social group equality in respect for civil liberties	-0.781	0.000	0.391	0.000	.846
2.3.3	Power distributed by socio-economic position	-0.787	0.000	0.381	0.000	.836
2.3.4	Power distributed by social group	-0.784	0.000	0.386	0.000	.840
2.3.5	Representation of disadvantaged social groups	-0.573	0.000	0.671	0.000	.883
						Cronbach's alpha = .873

2.3.B. Basic welfare

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.6	Infant mortality rate	-0.978	0.000	0.046	0.000	.910
2.3.7	Life expectancy	-0.893	0.000	0.205	0.000	.922
2.3.8	Kilocalories per person per day	-0.706	0.001	0.503	0.000	.932
2.3.9	Literacy	-0.861	0.000	0.261	0.000	.917
2.3.10	Average years of schooling	-0.852	0.000	0.277	0.000	.919
2.3.11	Educational equality	-0.656	0.001	0.572	0.000	.930
2.3.12	Health equality	-0.711	0.001	0.497	0.000	.925
						Cronbach's alpha = .933

2.3.C. Gender equality

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
2.3.13	Power distributed by gender	0.850	0.000	0.278	0.000	.755
2.3.14	CSO women's participation	0.775	0.000	0.400	0.000	.773
2.3.15	Female vs. male mean years of schooling	0.633	0.000	0.598	0.000	.81
2.3.16	Lower chamber female legislators	0.603	0.000	0.637	0.001	.798
2.3.17	Proportion of women in ministerial level positions	0.613	0.000	0.624	0.000	.799
						Cronbach's alpha = .824

Attribute 3: Checks on Government

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.1	Effective Parliament	-0.936	0.000	0.125	0.000	.879
3.2	Judicial Independence	-0.884	0.000	0.220	0.000	.896
3.3	Media Integrity	-0.902	0.000	0.188	0.000	.902
						Cronbach's alpha = .933

3.1. Effective Parliament

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.1.1	Legislature questions officials in practice	-0.881	0.000	0.225	0.000	.940
3.1.2	Executive oversight	-0.909	0.000	0.174	0.000	.937
3.1.3	Legislature investigates in practice	-0.939	0.000	0.119	0.000	.933
3.1.4	Legislature opposition parties	-0.914	0.000	0.165	0.000	.933
3.1.5	Executive constraints	-0.838	0.000	0.299	0.000	.950
						Cronbach's alpha = .953

3.2. Judicial Independence

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.2.1	High Court independence	-0.878	0.000	0.229	0.000	.934
3.2.2	Lower court independence	-0.872	0.000	0.241	0.000	.936
3.2.3	Compliance with High Court	-0.916	0.000	0.163	0.000	.933
3.2.4	Compliance with judiciary	-0.918	0.000	0.158	0.000	.932
3.2.5	Latent judicial independence	-0.843	0.000	0.291	0.000	.943
						Cronbach's alpha = .948

3.3. Media Integrity

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
3.3.1	Critical print/broadcast media	0.960	0.000	0.079	0.000	.908
3.3.2	Print/broadcast media perspectives	0.954	0.000	0.090	0.000	.908
3.3.3	Media bias	0.951	0.000	0.096	0.000	.910
3.3.4	Media corrupt	0.895	0.000	0.200	0.000	.913
3.3.5	Media freedom	0.751	0.000	0.437	0.000	.967
						Cronbach's alpha = .956

Attribute 4: Impartial Administration

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
4.1	Absence of Corruption	0.879	0.015	0.225	0.027	——
4.2	Predictable Enforcement	0.948	0.016	0.100	0.031	——
						Cronbach's alpha = .907

4.1. Absence of Corruption

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
4.1.1	Public sector corrupt exchanges	0.955	0.000	0.089	0.000	.930
4.1.2	Public sector theft	0.955	0.000	0.089	0.000	.930
4.1.3	Executive embezzlement and theft	0.934	0.000	0.128	0.000	.931
4.1.4	Executive bribery and corrupt exchanges	0.898	0.000	0.193	0.000	.936
4.1.5	Corruption	0.706	0.000	0.503	0.000	.966
						Cronbach's alpha = .950

4.2. Predictable Enforcement

No.	Component	Loading	SE	Uniqueness	SE	Cronbach's alpha if item deleted
4.2.1	Executive respects constitution	0.868	0.000	0.247	0.000	.887
4.2.2	Transparent laws with predictable enforcement	0.923	0.000	0.148	0.000	.876
4.2.3	Rigorous and impartial public administration	0.934	0.000	0.129	0.000	.871
4.2.4	Bureaucratic quality	0.710	0.000	0.495	0.000	.933
						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	-0.933	0.034	0.124	0.064	---
5.1.2	Engaged society	-0.840	0.034	0.288	0.065	---
						Cronbach's alpha = .875

D.2. 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.

Attribute 1. Representative Government

		1.1	1.2	1.3	1.4
1.1	Clean Elections		.663	.893	.793
1.2	Inclusive Suffrage	5887		.533	.609
1.3	Free Political Parties	5887	5894		.789
1.4	Elected Officials	5887	5894	5894	

1.1. Clean Elections

		1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6
1.1.1	EMB autonomy		.830	.809	.906	.932	.822
1.1.2	Election voter registry	5891		.862	.868	.857	.660
1.1.3	Election other voting irregularities	5891	5891		.854	.854	.671
1.1.4	Election government intimidation	5891	5891	5891		.944	.760
1.1.5	Election free and fair	5891	5891	5891	5891		.803
1.1.6	Competition	5890	5887	5887	5887	5887	

1.3. Free Political Parties

		1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.3.7	1.3.8	1.3.9
1.3.1	Party ban		.807	.786	.755	.758	.707	.668	.688	.674
1.3.2	Barriers to parties	5894		.877	.816	.844	.704	.668	.700	.685
1.3.3	Opposition parties autonomy	5764	5764		.799	.847	.676	.639	.661	.659
1.3.4	Elections multiparty	5891	5891	5761		.805	.763	.757	.772	.749
1.3.5	Competitiveness of participation	5617	5617	5487	5614		.716	.678	.692	.678
1.3.6	Multiparty elections	5890	5890	5760	5887	5616		.855	.855	.765
1.3.7	Was opposition allowed?	5823	5823	5701	5823	5548	5820		.902	.806
1.3.8	Was more than one party legal?	5823	5823	5701	5823	5548	5820	5823		.775
1.3.9	Were opposition leaders prevented from running?	5704	5704	5586	5704	5431	5702	5704	5704	

1.4. Elected Government

		1.4.1	1.4.2	1.4.3	1.4.4	1.4.5
1.4.1	Elected executive index		.549	.506	.579	.708
1.4.2	Competitiveness of executive recruitment	5616		.517	.386	.468
1.4.3	Openness of executive recruitment	5616	5617		.461	.570
1.4.4	Legislative elections	5889	5616	5616		.746
1.4.5	Executive elections	5889	5616	5616	5890	

Attribute 2. Fundamental Rights

		2.1	2.2	2.3
2.1	Access to Justice		.858**	.784**
2.2	Civil Liberties	5914		.755**
2.3	Social Rights	5917	5914	

2.1. Access to Justice

		2.1.1	2.1.2	2.1.3	2.1.4	2.1.5
2.1.1	Access to justice for men		.944	.645	.611	.833
2.1.2	Access to justice for women	5894		.619	.588	.808
2.1.3	Judicial corruption decision	5894	5894		.689	.721
2.1.4	Judicial accountability	5894	5894	5894		.634
2.1.5	Fair trial	5876	5876	5876	5876	

2.2. Fundamental Rights

		2.2.A	2.2.B	2.2.C	2.2.D	2.2.E
2.2.A	Freedom of expression		.944	.825	.870	.862
2.2.B	Freedom of association and assembly	5873		.834	.840	.795
2.2.C	Freedom of religion	5873	5873		.847	.693
2.2.D	Freedom of movement	5873	5873	5873		.790
2.2.E	Personal integrity and security	5873	5873	5873	5876	

2.2.A. Freedom of expression

		2.2.1	2.2.2	2.2.3	2.2.4	2.2.5	2.2.6	2.2.7
2.2.1	Print/ broadcast censorship effort		.896	.895	.881	.878	.872	.845
2.2.2	Harassment of journalists	5891		.868	.867	.868	.841	.829
2.2.3	Media self-censorship	5891	5891		.846	.860	.844	.815
2.2.4	Freedom of discussion for women	5891	5891	5891		.960	.890	.802
2.2.5	Freedom of discussion for men	5891	5891	5891	5894		.895	.805
2.2.6	Freedom of academic and cultural expression	5891	5891	5891	5894	5894		.783
2.2.7	Freedom of opinion and expression	5873	5873	5873	5876	5876	5876	

2.2.B. Freedom of association and assembly

		2.2.8	2.2.9	2.2.10
2.2.8	CSO entry and exit		.894	.836
2.2.9	CSO repression	5891		.810
2.2.10	Freedom of assembly and association	5876	5873	

2.2.C. Freedom of religion

		2.2.11	2.2.12	2.2.13
2.2.11	Freedom of religion		.826	.733
2.2.12	Religious organization repression	5891		.693
2.2.13	Freedom of thought, conscience, and religion	5876	5873	

2.2.D. Freedom of movement

		2.2.14	2.2.15	2.2.16	2.2.17
2.2.14	Freedom of foreign movement		.793	.808	.742
2.2.15	Freedom of domestic movement for women	5894		.825	.677
2.2.16	Freedom of domestic movement for men	5894	5894		.695
2.2.17	Freedom of movement and residence	5876	5876	5876	

2.2.E. Personal integrity and security

		2.2.18	2.2.19	2.2.20	2.2.21	2.2.22	2.2.23
2.2.18	Freedom from forced labor for women		.894	.646	.638	.578	.435
2.2.29	Freedom from forced labor for men	5894		.642	.643	.575	.410
2.2.20	Freedom from torture	5894	5894		.902	.758	.565
2.2.21	Freedom from political killings	5894	5894	5894		.786	.598
2.2.22	Human rights protection scores	5583	5583	5583	5583		.666
2.2.23	Internal conflict	3962	3962	3962	3962	3702	

2.3. Social Rights and Equality

		2.3.A	2.3.B	2.3.C
2.3.A	Social group equality		.601	.696
2.3.B	Basic welfare	5894		.655
2.3.C	Gender equality	5894	5894	

2.3.A. Social group equality

		2.3.1	2.3.2	2.3.3	2.3.4	2.3.5
2.3.1	Social class equality in respect for civil liberties		.716	.694	.669	.495
2.3.2	Social group equality in respect for civil liberties	5894		.529	.674	.393
2.3.3	Power distributed by socioeconomic position	5894	5894		.605	.559
2.3.4	Power distributed by social group	5894	5894	5894		.405
2.3.5	Representation of disadvantaged social groups	5426	5426	5426	5426	

2.3.B. Basic welfare

		2.3.6	2.3.7	2.3.8	2.3.9	2.3.10	2.3.11	2.3.12
2.3.6	Infant mortality rate		.924	.777	.816	.866	.731	.755
2.3.7	Life expectancy	5827		.742	.700	.780	.641	.689
2.3.8	Kilocalories per person per day	5477	5514		.548	.689	.619	.673
2.3.9	Literacy	3441	3441	3225		.947	.587	.596
2.3.10	Average years of schooling	5827	5870	5514	3441		.694	.686
2.3.11	Educational equality	5842	5870	5514	3441	5870		.917
2.3.12	Health equality	5842	5870	5514	3441	5870	5894	

2.3.C. Gender equality

		2.3.13	2.3.14	2.3.15	2.3.16	2.3.17
2.3.13	Power distributed by gender		.677	.541	.509	.519
2.3.14	CSO women's participation	5891		.546	.383	.457
2.3.15	Female vs. male mean years of schooling	5870	5867		.334	.321
2.3.16	Lower chamber female legislators	5598	5595	5579		.586
2.3.17	Proportion of women in ministerial level positions	4185	4182	4184	4118	

Attribute 3. Checks on Government

		3.1	3.2	3.3
3.1	Effective Parliament		.826	.843
3.2	Judicial Independence	5815		.796
3.3	Media Integrity	5815	5894	

3.1. Effective Parliament

		3.1.1	3.1.2	3.1.3	3.1.4	3.1.5
3.1.1	Legislature questions officials in practice		.799	.821	.806	.736
3.1.2	Executive oversight	5423		.874	.797	.748
3.1.3	Legislature investigates in practice	5425	5423		.853	.750
3.1.4	Legislature opposition parties	5425	5425	5425		.827
3.1.5	Executive constraints	5228	5228	5229	5230	

3.2. Judicial Independence

		3.2.1	3.2.2	3.2.3	3.2.4	3.2.5
3.2.1	High Court independence		.892	.760	.764	.739
3.2.2	Lower court independence	5894		.755	.764	.721
3.2.3	Compliance with High Court	5894	5894		.890	.778
3.2.4	Compliance with judiciary	5894	5894	5894		.772
3.2.5	Latent judicial independence	5406	5406	5406	5406	

3.3. Media Integrity

		3.3.1	3.3.2	3.3.3	3.3.4	3.3.5
3.3.1	Print/broadcast media critical		.920	.907	.859	.720
3.3.2	Print/broadcast media perspectives	5891		.911	.838	.692
3.3.3	Media bias	5891	5891		.854	.710
3.3.4	Media corrupt	5891	5891	5891		.731
3.3.5	Media Freedom	5880	5880	5880	5880	

Attribute 4. Impartial Administration

		4.1	4.2
4.1	Absence of Corruption		.829
4.2	Predictable Enforcement	5894	

4.1. Absence of Corruption

		4.1.1	4.1.2	4.1.3	4.1.4	4.1.5
4.1.1	Public sector corrupt exchanges		.913	.860	.833	.660
4.1.2	Public sector theft	5894		.858	.809	.673
4.1.3	Executive embezzlement and theft	5894	5894		.870	.663
4.1.4	Executive bribery and corrupt exchanges	5894	5894	5894		.658
4.1.5	Corruption	3962	3962	3962	3962	

4.2. Predictable Enforcement

		4.2.1	4.2.2	4.2.3	4.2.4
4.2.1	Executive respects constitution		.789	.780	.636
4.2.2	Transparent laws with predictable enforcement	5894		.850	.642
4.2.3	Rigorous and impartial public administration	5894	5894		.665
4.2.4	Bureaucratic quality	3962	3962	3962	

Attribute 5. Participatory Engagement

5.1. Civil Society Participation

		5.1.1	5.1.2
5.1.1	CSO participatory environment		.777
5.1.2	Engaged society	5891	

5.4. Subnational Democracy

		5.4.1	5.4.2	5.4.3
5.4.1	Local government elected		.419	.492
5.4.2	Regional government elected	5360		.272
5.4.3	Subnational elections free and fair	4688	4386	

Annex E

Correlations between GSoD indices and extant measures

Below is presented the covariation between GSoD indices and extant measures constructed to measure relatively similar concepts. The correlation coefficients (Pearson's r) indicate the general level of agreement (covariation) between them. As a rule-of-thumb, in a country-years 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 mean low levels of agreement.

Attribute 1: Representative Government

Correlation with:	Correlation coefficient	N	% of GSODI N
Voice and accountability (WGI)	.885	2559	43.12%
Political rights (FH) (inversed)	.889	5378	90.61%
Electoral process and pluralism (EIU)	.889	1519	25.59%
Political participation (BTI)	.884	719	12.11%
Polity2 (Polity)	.877	5325	89.72%
Polyarchy index (V-Dem)	.936	5609	94.51%

Subattribute 1.1: Clean Elections

Correlation with:	Correlation coefficient	N	% of GSODI N
Perceptions of electoral integrity (EIP)	.858	142	2.39%
Electoral self-determination (CIRI)	.771	4234	71.34%
Free and fair elections (BTI)	.878	719	12.11%

Subattribute 1.4: Elected Government

Correlation with:	Correlation coefficient	N	% of GSODI N
Effective power to govern (BTI)	.701	720	12.13%

Attribute 2: Fundamental Rights

Subattribute 2.1: Access to Justice

Correlation with:	Correlation coefficient	N	% of GSODI N
Due process of law and rights of the accused (WJP)	.832	288	4.85%
Civil justice (WJP)	.839	288	4.85%

Subattribute 2.2: Civil Liberties

Correlation with:	Correlation coefficient	N	% of GSODI N
Civil liberties (FH) (inversed)	.901	5381	90.67%
Civil liberties (EIU)	.878	1517	25.56%

Subcomponent 2.2.a: Freedom of expression

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of opinion and expression is effectively guaranteed (WJP)	.872	286	4.82%
Freedom of speech (CIRI)	.670	4234	71.34%
Freedom of expression (BTI)	.877	1440	24.26%

Subcomponent 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)	.819	286	4.82%
Freedom of assembly and association (CIRI)	.750	4229	71.26%
Freedom of assembly and association (BTI)	.874	1440	24.26%

Subcomponent 2.2.c: Freedom of religion

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of belief and religion is effectively guaranteed (WJP)	.772	286	4.82%
Freedom of religion (CIRI)	.619	3490	58.80%

Subcomponent 2.2.d: Freedom of movement

Correlation with:	Correlation coefficient	N	% of GSODI N
Freedom of movement (CIRI)	.588	3495	58.89%

Subcomponent 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)	.853	288	4.85%
Conflict intensity (BTI) (inversed)	.605	1440	24.26%

Subattribute 2.3: Social Rights and Equality

Correlation with:	Correlation coefficient	N	% of GSODI N
Equal opportunity (BTI)	.768	720	12.13%

Subcomponent 2.3.a: Social group equality

Correlation with:	Correlation coefficient	N	% of GSODI N
Equal treatment and absence of discrimination (WJP)	.698	288	4.85%

Subcomponent 2.3.b: Basic needs provisions

Correlation with:	Correlation coefficient	N	% of GSODI N
Social safety nets (BTI)	.822	720	12.13%

Subcomponent 2.3.c: Gender equality

Correlation with:	Correlation coefficient	N	% of GSODI N
Women's social rights (CIRI)	.523	4194	70.67%
Women's economic rights (CIRI)	.599	3235	54.51%

Attribute 3: Checks on Government

Correlation with:	Correlation coefficient	N	% of GSODI N
Separation of powers (BTI)	.842	718	12.10%

Subattribute 3.1: Effective Parliament

Correlation with:	Correlation coefficient	N	% of GSODI N
Government powers are effectively limited by the legislature (WJP)	.757	288	4.85%

Subattribute 3.2: Judicial Independence

Correlation with:	Correlation coefficient	N	% of GSODI N
Government powers are effectively limited by the judiciary (WJP)	.783	288	4.85%
Judicial independence (BTI)	.810	720	12.13%
Independence of the judiciary (CIRI)	.699	4275	72.03%

Subattribute 3.3: Media Integrity

Correlation with:	Correlation coefficient	N	% of GSODI N
Government powers are subject to non-governmental checks (WJP)	.778	288	4.85%

Attribute 4: Impartial Administration

Correlation with:	Correlation coefficient	N	% of GSODI N
Government regulations are applied and enforced without improper influence (WJP)	.842	288	4.90%
Basic administration (BTI)	.643	720	12.13%

Subattribute 4.1: Absence of Corruption

Correlation with:	Correlation coefficient	N	% of GSODI N
Absence of corruption (WJP)	.904	288	4.90%
Absence of corruption (WGI)	.885	2559	43.12%
Prosecution of office abuse (BTI)	.737	720	12.13%
Anti-corruption policy (BTI)	.758	719	12.11%

Subattribute 4.2: Predictable Enforcement

Correlation with:	Correlation coefficient	N	% of GSODI N
Government regulations are effectively enforced (WJP)	.760	288	4.90%
Administrative proceedings are conducted without unreasonable delay (WJP)	.610	288	4.90%
Government effectiveness (WGI)	.862	2559	43.12%
Implementation (BTI)	.796	719	12.11%

Attribute 5: Participatory Engagement

Subattribute 5.1: Civil Society Participation

Correlation with:	Correlation coefficient	N	% of GSODI N
Interest groups (BTI)	.662	1400	24.26%
Civil society traditions (BTI) (inversed)	.583	1400	24.26%

Annex F

The State of Democracy Assessment Framework and the Global State of Democracy indices: From qualitative assessment to quantitative measurement

The State of Democracy (SoD) Assessment Framework was developed by David Beetham, Stuart Weir, Sarah Bracking and Iain Kearton, in collaboration with International IDEA, in 2002, based on the work of Democratic Audit housed at the University of Essex (Beetham et al. 2002a). The SoD framework was outlined in the original International IDEA Handbook on Democracy Assessment (Beetham et al. 2002b) and developed as a comprehensive in-country democracy assessment framework. It was designed to be both universally applicable and flexible for in-country adaptation. The framework was revised and updated in a consultative process in 2006–08 and the revision benefited from different experiences at the country level (see Beetham et al. 2008).

Both the SoD Assessment Framework and the accompanying Handbook, Assessing the Quality of Democracy: A Practical Guide (Beetham et al. 2008) are structured around two core principles, seven mediating values and four pillars covering 15 sub-themes. Under the 15 sub-themes there are 90 questions (Beetham et al. 2008: 73–78). The two principles that form the basis for the concept of democracy are: (a) popular control over decision-makers; and (b) political equality of those who exercise that control. These two broad principles are realized in practice through the seven mediating values: participation, authorization, representativeness, accountability, transparency, responsiveness and solidarity.

At a lower level of abstraction, the four pillars are divided into 15 sub-themes with corresponding assessment questions that aim to comprehensively cover their respective democratic institutions, actors and processes under the following conceptual categories: citizenship, law and rights; representative and accountable government; civil society and popular participation; and democracy beyond the state. Table F.1 presents a detailed overview of the four pillars, the sub-themes and the overarching assessment questions for each sub-theme, followed by an overview of how the SoD Framework was used and modified in the construction of the GSoD indices.

Comparing the conceptual frameworks of the SoD and the GSoD indices

The conceptual framework for the GSoD indices shares with the SoD framework the two fundamental principles of popular control and political equality. Moreover, the revised conceptual framework has taken the pillars (attributes) and sub-themes (subattributes) from the SoD framework as a starting point. However, as is clear from a direct comparison with the attributes and subattributes in Table 2.1 (see Chapter 2) and Table 3.2 (see Chapter 3), the conceptual frameworks are similar but not identical.

The modifications generally had three aims. The first of these aims was to give the GSoD indices a more explicit foundation in democratic theory in order to justify the inclusion and exclusion of attributes and subattributes. The second aim was to adjust the attributes and subattributes in order to increase coherence, exhaustiveness and mutual exclusivity. This is the reason why, for instance, the overarching concept of the rule of law is no longer mentioned explicitly; its ordinary meaning is so broad that it is associated with features covered by many different attributes and subattributes. The third aim was to construct a conceptual tool that lends itself to systematic, cross-national and cross-temporal measurement.

TABLE F.1.

Pillars and sub-themes of the State of Democracy Assessment Framework

	Pillars	Sub-themes	Overarching questions
1	Citizenship, law and rights	1.1 Nationhood and citizenship	Is there public agreement on a common citizenship without discrimination?
		1.2 Rule of law and access to justice	Are state and society consistently subject to the law?
		1.3 Civil and political rights	Are civil and political rights equally guaranteed for all?
		1.4 Economic and social rights	Are economic and social rights equally guaranteed for all?
2	Representative and accountable government	2.1 Free and fair elections	Do elections give the people control over governments and their policies?
		2.2 The democratic role of political parties	Does the party system assist the working of democracy?
		2.3 Effective and responsive government	Is government effective in serving the public and responsive to its concerns?
		2.4 The democratic effectiveness of parliament	Does the parliament or legislature contribute effectively to the democratic process?
		2.5 Civilian control of the military and police	Are the military and police forces under civilian control?
		2.6 Integrity in public life	Is the integrity of conduct in public life assured?
3	Civil society and popular participation	3.1 The media in a democratic society	Do media operate in a way that sustains democratic values?
		3.2 Political participation	Is there full citizen participation in public life?
		3.3 Decentralization	Are decisions taken at the level of government that is most appropriate for the people affected?
4	Democracy beyond the state	4.1 External influences on the country's democracy	Is the impact of external influences broadly supportive of the country's democracy?
		4.2 The country's democratic impact abroad	Do the country's international policies contribute to strengthening global democracy?

The mediating values have been used to link the principles to the attributes where suitable but, in order to reduce complexity and overlaps, they are not considered an independent layer in the GSoD framework. Like the SoD framework, each of the subattributes has been linked to an overarching assessment question. Many of these questions are similar in the two frameworks, but some of the original questions were somewhat ambiguous or multidimensional and therefore required revision in order for them to guide the selection of indicators.

Finally, the 90 assessment questions (including 15 overarching questions and 75 specific questions) from the SoD framework served as inspiration for the specification of the subattributes and the selection of empirical indicators. However, this layer has also been excluded from the GSoD framework in order to reduce complexity and ease the task of empirical measurement, but also to acknowledge the fact that the assessment questions were not initially designed for quantitative cross-country measurement. For more information on the key features of the SoD assessment questions see International IDEA (2008: 32–33).

Most, but not all, of the aspects mentioned in the original search questions have been covered. The meaning of many categories has generally been restricted somewhat. This was done to avoid overlaps and redundancy, and to achieve a higher level of conceptual

clarity, consistency and coherence. Furthermore, the revisions also took account of the fact that the attributes and subattributes should guide the construction of empirical indices covering many countries and years based on extant data sets—and that no novel data collection was being carried out in connection with the project.

The aim was to stay close to the SoD conceptual framework, which has been—and continues to be—a core reference point in connection with International IDEA's activities. However, as noted above, translating the framework into quantitative indices required a number of revisions.

Among the minor changes was the renaming of the pillars and sub-themes of democracy into attributes and subattributes, respectively. This was done to standardize the terminology with more common usages in the tradition of conceptualizing and measuring democracy and other social science concepts. The same reasoning led to changes in the names of several attributes and subattributes. The contents of Table 2.1 and Table F.1 might thus appear more different from each other than they really are. With the exception of direct democratic instruments, however, all of the attributes and subattributes of the GSoD framework have firm roots in the SoD framework. The direct democracy sub-dimension is included because it features prominently among the democratic theorists who emphasize the importance of political participation. Direct democracy is an alternative, supplementary method of political participation that deserves to be captured. Under the same attribute, the political participation subattribute was divided into an electoral participation component and a civil society participation component.

Furthermore, some of the subattributes have been reordered. For example, media integrity is now placed under checks on government rather than civil society and popular participation (cf. Schultz 1998).

The most substantial change is the exclusion of the fourth pillar from the SoD framework: democracy beyond the state. First and foremost, it was not clear how to establish a link between the principles of popular control and political equality, and this pillar. Moreover, the meaning of the corresponding sub-themes is rather ambiguous. Finally, it would be virtually impossible to find valid indicators to capture this pillar.

Similar challenges led to the exclusion of the citizenship sub-theme. The associated search questions made up a rather incoherent whole and it has not been possible to come up with a viable alternative that clearly separates relevant from irrelevant citizenship criteria. Finally, there is no data available that captures the most important distinctions for many countries and years. This pillar was therefore modified to capture and focus on access to justice, civil liberties and social rights.

One of the three pillars remaining after excluding pillar four, representation and accountability, has been divided into three separate attributes: representative government, checks on governments and impartial administration. In this way, the core features of representative democracy shared with many extant concepts and measures of minimalist or electoral democracy (Møller and Skaaning 2011; Munck 2009) and directly related to access to political power are kept together without being mixed with features related to horizontal accountability and impartial administration (Rothstein 2012; Mazzuca 2010; Munck 2016; Mazzuca and Munck 2014; Andersen, Møller and Skaaning 2014). Against this backdrop, the aim of the subdivision is to establish more conceptual coherence and to bring together features that are frequently combined in the academic literature. Finally, the inclusiveness of elections is now represented by a separate category as recommended in the literature (see Paxton 2000; Coppedge, Alvarez and Maldonado 2008; Skaaning, Gerring and Bartusevicius 2015; Munck 2016).

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