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"Why do we still measure state fragility?"

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Abstract

Measuring and monitoring countries that are fragile is a rapidly growing but complicated task. Quantifying state fragility or any concept that is highly complex is loaded with theoretical assumptions, principles and definitions that may differ substantially across indices. This paper explains why the fragility community remains invested in expanding the concept of fragility, presents an updated stocktaking of the existing fragility indices and evaluates them using the framework approach. Reviewing the selected indices reveals that they can be indeed a source of useful signal. However, there can also be worthless noise associated with these indices because of the identified cross-reference issue between the indices, problems of double-counting or time lag in data. The paper argues that it would rather complicate than aid to believe that there is a particular index that is better than another. Instead, it encourages a more nuanced understanding of different fragility indices and concludes with offering insights into how to make sense of them.

Keywords: state fragility, measurement, composite indicators
JEL codes: D74, O43, O19

Introduction

18.4 million refugees originated from fragile contexts, whereas 1.5 million originated from non-fragile developing contexts[2]. Additionally, seven out of top ten refugee-hosting developing countries are also classified as fragile by the OECD. Conflicts can have devastating effects on developing countries, a country loses 10 to 50 per cent of economic production due to violent conflict, depending on conflict intensity and duration [3]. On a global level, 44 years of conflicts was found to cost 12 percent of global wealth[4]. If fragile countries are more likely to experience conflict, then fragility, why and how we measure it, is important for understanding possible pathways and sustainable, peaceful transitions for fragile countries.

Although not all countries classified as fragile and conflict-affected settings experience active conflict, the global level of violence has peaked in the last decade and many countries that were fragile have entered or relapsed into war[5]. These are countries that are often characterized by complex interactions of conflict, poverty, institutional instability, or environmental shocks and often suffer from chronic crises[6]. They also appear vulnerable to internal and external pressures which can undermine state structures and, in some cases, even trigger conflicts or humanitarian emergencies. Although the episodes of instability are spreading in many countries around the world, there are deeply rooted structural factors in the context of fragile countries that represent distinct challenges, such as contested territories, political power-sharing, persistent inequalities, or repeated cycles of violence.

Measuring fragility can be extremely complex. The symptoms of fragility can include everything from deep structural challenges associated with post-colonialism and independence, geopolitics, and compounded development obstacles alongside longstanding risk factors including social exclusion, ethnic power relations and questions about government legitimacy which can also be exacerbated by

[2] https://www.oecd-ilibrary.org/development/states-of-fragility-2020_ba7c22e7-en
[3] Mueller, H. F., Piemontese, L., & Tapsoba, A. (2017). Recovery from conflict: lessons of success. World Bank Policy Research Working Paper, (7970). https://ssrn.com/abstract=2923522
[4] de Groot, O. J., Bozzoli, C., Alamir, A., & Brück, T. (2022). The global economic burden of violent conflict. *Journal of Peace Research*, *59*(2), 259–276. https://doi.org/10.1177/00223433211046823
[5] The IMF Strategy for Fragile and Conflict-Affected States (2022)
[6] Milante, G. and Lilja, J. (2022). https://www.sipri.org/publications/2022/sipri-insights-peace-and-security/chronic-crisis-financing-fifty-years-humanitarian-aid-and-future-prospects

ephemeral shocks and hazards associated with terms of trade shocks, conflict spillovers from neighboring countries and public trust in government and military. How that fragility is conceptualized will determine how it is measured and this can have serious implications for targeting, policy formulation and risk assessments.

As a quantitative form of knowledge, indices allow quick comparison between states but can become trite or meaningless if too much of the complexity of fragility is 'lost in the algorithm' - simply identifying many different indicators and then averaging them does not necessarily yield a useful index. Furthermore, there is a crowded space of indices that cannot serve all purposes for all users at the same time – 'one size does not fit all.' To help understand why there are so many indices and how to understand and appreciate them, we proceed in two steps in this paper: (1) we try to explain why multilateral organizations are still invested in expanding the concept and labelling countries as fragile, and (2) we follow a framework approach described in Gisselquist (2014) for evaluating indices. As part of the framework, we unpack the underlying source indicators of selected indices, identify possible sources of both useful signal and worthless noise within them, and briefly compare some of the current classifications as an example of how different definitions may result in somewhat divergent rankings. Rather than simply acknowledging certain indices and refuting others, we wish to instead demonstrate that the proliferation of fragile indices is primarily associated with the complexity of fragility and that the problem is not multiple choice, option A, B, C or D, rather the likely best answer is, all of the above. This paper contributes to the literature on approaches to measuring state fragility and updates the stocktaking of current indices in order to clarify, and this is our key point, why there are multiple ways of using fragility indices and to offer insights into how to make sense of them.

What is fragility?

The measurement of anything complex is further complicated when there is disagreement over the concept. As we demonstrate in this paper, the concept of fragility is still widely debated and there are many competing definitions. One such definition not attached to any particular index is: the combination of *the lack of ability and willingness of a state to carry out its core functions to meet the basic needs of its citizens, lack of monopoly of violence and poor legitimacy of the government among its population* (Call 2011, Ziaja, et al., 2019). In these terms, fragile states are defined contra (the 'polar opposite') to highly functional states (Tikuisis, et al., 2017).

An important assumption that is implicit in all definitions is that state fragility in its most fundamental sense is associated with the concept of 'governance'. Both concepts seek to capture common characteristics such as the quality of government performance and the exercise of power and even draw on similar indicators and datasets. Governance can be understood as something that pertains to the functioning of a state, which is the backbone of fragility, whereas fragility rather captures the degree of vulnerability to pressures that the states experience[7]. There is indeed a complex relationship between governance and state fragility – fragility tends to be associated with poor governance, political exclusion or lack of institutional capacity and other characteristics of governance. However, it would be misleading to conflate the idea of 'fragility' with that of 'governance'. Although such conceptual lines are hard to draw, the two concepts should not be treated equivalently.

Complex realities and methodological challenges of studying the phenomenon have not kept the community from pushing this field further. On the contrary, global attention has been growing incrementally since the take-off of the concept and become a priority of important security and

[7] See Gisselquist (2014) for a more detailed discussion about the concepts of 'governance' and 'good governance'.

development agendas such as the 2020 United States' ten-year Global Fragility Strategy, the World Bank Group Strategy for Fragility, Conflict, and Violence 2020–2025 and of special units embedded within development agencies dedicated to finding new models of engagement in fragile countries[8] [9]. Next to the policy and public debates is the critical scholarship that continues to explore the issue of how quantitative rankings of fragility interact or compete with our empirical understanding of fragile countries.

Multilateral approaches to understanding fragility

Several development institutions and government agencies have been influential in driving the fragile states agenda, framing the debate, conceptualization, and producing the country rankings. This is reflected not only in a big range of definitions available today – it would be almost futile to try to harmonize each actor's interpretations of fragility that can vary widely across time and space – but it also explains the emergence of specifically targeted and sometimes minimalist views on fragile countries. For instance, in their current definition, key international actors such as the World Bank (WB) and the Organization for Economic Co-operation and Development (OECD) mainly take the policy and institutional perspectives in their identification of fragile countries, while the African Development Bank (ADB)'s idea is centered around the development challenge that results from poor governance, conflict, and other structural factors like economic or social disruption and isolation[10] [11]. As a testament to the challenges of creating consensus on measurement of an evolving concept, note that for some time, the World Bank (WB) and the African Development Bank (ADB) collaborated on producing a joint list of countries that were fragile. However, as the institutional scores started to diverge over time, it became increasingly difficult to maintain the so-called 'harmonized list'. Consequently, the list was eventually discontinued.

The g7+ is a group of countries that self-identified as fragile, coming together to advance the debate and communicate the challenges that are faced by the member countries themselves[12]. With the emergence of the g7+ the framing of fragility has extended to the countries that take ownership and leadership in setting the agenda and highlighting the demand for tailored solutions. In other words, the actual countries involved play a crucial role in the fragility debate, including the adoption of their own terminology and the measurement of progress through peacebuilding and statebuilding indicators. This is also shown by a leading role that the g7+ took in developing the New Deal approach for engaging in fragile states[13].

'Fragility' has been critiqued as a 'suitcase' word - a catch-all term packed with multiple meanings. Furthermore, it has evolved over time and the term 'fragile' is seen as less pejorative compared to 'failed state' which was used widely in the late 1990s. 'Fragility' also lacks a forecasting component found in 'high risk of conflict' despite fragility being associated with a high risk of conflict. The term 'fragile situations' quickly gained acceptance in the development community as it allowed institutions like the World Bank to navigate around the matter of geopolitical and territorial tensions, such as the Palestine territories, Somalia, independence movements of East Timor or Kosovo during the times when the political issues were still unresolved (Call 2008; Zoellick 2008).

[8] https://www.state.gov/wp-content/uploads/2021/01/2020-US-Strategy-to-Prevent-Conflict-and-Promote-Stabilit-508c-508.pdf
[9] https://documents1.worldbank.org/curated/en/844591582815510521/pdf/World-Bank-Group-Strategy-for-Fragility-Conflict-and-Violence-2020-2025.pdf
[10] As the concept continues to evolve, OECD has gradually moved toward a 'multi-dimensional' idea focusing on the diversity of risks and vulnerabilities that lead to fragility.
[11] https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/terminology/wcms_504528.pdf
[12] https://www.g7plus.org/
[13] https://www.g7plus.org/new-deal-implementation/

Nay (2014) provides an evolutionary overview of the concept and a compelling analysis of the instrumental role that institutions like the WB and the OECD have played in shaping and normalizing the 'fragile states' concept through implementation of their policy agendas in developing countries. As the author points out, this concept is far from stable in time and space since it becomes a subject of varied interpretations and uses. In practice, with each development actor or analyst may come a different assessment or an adapted measurement tool and data production technique of fragility that is ultimately driven by that actor's own purposes, interests or mandates. Once these fragility measurements are established, they encompass certain principles, complexities and theoretical assumptions inscribed in them.

The uses of indices of fragility may determine which indices are used. Typically, donor organizations and practitioners are primarily interested in identifying the condition of a country at a given moment and over time to be able to draw comparisons, conduct political risk assessments, allocate development assistance, coordinate debt relief, peace operations, monitor the development progress and so on. Such diagnostic approach to identifying fragile countries carries a more operational purpose than analytical and aims to report the overall direction in which a country is moving. Yet, academic literature calls for deeper insight into the episodes of fragility inquiring about its origins and persistence (Grävingholt et al 2015, Carment et al. 2011, Besley and Persson 2011, Kaplan 2008). In the most recent approaches to determining fragile countries scholars have stressed the need for improved theoretical understanding of the phenomenon (Milante and Woolcock 2017, Tikuisis and Carment 2017).

Why are we still interested in identifying fragility and to what end?

Although identifying countries that are fragile is a complicated task as a both theoretical and empirical exercise, intuitively, the question arises as to *why* the international development and donor community still invest in this concept of fragility. In the 1980s and early 1990s, the "Washington Consensus" and aid allocation system aimed to bring economic growth and stability based on basic economic principles of privatization and fiscal discipline – many of which were disconnected from the political reality on the ground in developing countries. Over time, a few countries emerged as successful cases of the principles of the Washington Consensus, but many other countries did not, despite implementing the policy recommendations and institutional reforms (under strong conditionality from donors). Many of these countries fell further behind on economic growth and poverty reduction and many of those that fell behind fell into civil war (dubbed 'development in reverse' by the World Bank which had previously endorsed the principles of the Washington Consensus).

Unsuccessful experiences of Mali, Côte d'Ivoire, the Central African Republic, Mozambique, Tunisia and Egypt presented emerging cases of concern where governments adopted the prescribed new policy agenda and eventually experienced political instability, repeated conflicts or civil war in the late 1990s or later[14]. The concept of fragility can be seen as a response to why so many countries were left behind in the early 2000s. These were countries characterized by weak capacities or 'ineffective' institutions that, almost as an afterthought, led to the realization that they require a special approach and, ultimately, gave rise to a new and ever-growing terminology ('vulnerable states', 'states in crisis', 'low-income countries under stress', 'difficult environments', 'collapsed states', 'failed states', 'fragile states', etc)[15].

Against the emerging thinking about development, countries that were seen as special cases or fragile on the ground also presented 'difficult partnerships' for a group of donor countries at the roundtable

[14] See Rodrik (2006) for more examples.

[15] see Grim et al (2014) for a more detailed description about the origins and evolution of the concept.

discussions (Grim et al 2014, Baranyi & Desrosiers 2012). Fragile environments are indeed complicated places for achieving development gains that often demand patience and resource-intensive work from all parties involved, both donor agencies and local counterparts. Nevertheless, major actors like the World Bank, OECD or other multilateral organizations have a continued interest in measuring and monitoring state fragility for the purposes of marking those particular cases in order to indicate that they need to 'work differently' in countries that are fragile.

At the same time, the politics of fragility rankings reveals another incentive for producing classifications of fragile countries. Arndt (2009) explains how governance measures like the WGI and CPIA – both of which are also used as proxy measures for fragility – served as an entry point for country dialogue between the World Bank staff and local government officials. In her research, Arndt (2009) provides an interesting insight into how the WGI and CPIA measures were used to establish a policy-focused debate in countries that ranked well, but that they also incentivized international organizations to understand other countries where governments were not willing to reform. Similarly, and perhaps with even more relevance, fragility rankings serve both as a signal from counterparts and an entry point for a *political dialogue* to help the external actors to identify who in the national government has political will and to what extent is seriously committed to reform processes.

Finally, fragility indices are also a common platform for building development partnerships and formulating effective donor strategies in addressing issues of fragility, while at same time offering considerable "cost-sharing benefits" for international actors[16]. Agreeing upon which countries are fragile can facilitate support and cooperation with other donors. In this context, fragility rankings serve as a tool for international actors to identify potential partners that are willing to collaborate through different models of engagement. For instance, agreeing upon which countries are fragile, to what degree and in which way, can be the starting point to bring together donors that have aligned interests as well as shared commitments to set development priorities, create joint programs or pooled funding schemes, encourage knowledge exchange and other frameworks of partnership. In summary, indices may serve a coordinating function for development actors.

Our current knowledge on measuring fragility

In addition to the externally influenced knowledge about state fragility, the chronic confusion over its meaning is also due to various and gradually shifting perspectives of what fragile societies look like on the ground. Some scholars define the role of a state (the way that a state exercises its authority and manages resources) as a bedrock of state fragility and hence treat it as a main variable or component in specifying the concept. This view is based on interdependent relationship between governance and fragility suggesting that poor governance can contribute to state fragility, and fragility can further erode governance. Here, when translating the fragility concept to a measure, the conceptual logic of the state's role sets off on varied but inter-related paths: measured as state's core functions (ability and willingness to deliver basic needs), as monopoly on the use of force, or as other attributes of explicitly political nature such as legitimate political institutions (Call 2011, Carment et al 2015, Jang and Milante 2016, Milante and Woolcock 2021,).

Vis-à-vis the state view, other scholars and practitioners explicitly put the presence of social cohesion central in their interpretations of fragility. The social cohesion lens, widely adopted in peacebuilding, has not so long ago received a push from practitioners and academics[17]. It is also associated with the

[16] more on multilateralism see Charles T. Call (2016) The Lingering Problem of Fragile States, The Washington Quarterly, 39:4, 193-209, DOI: 10.1080/0163660X.2016.1261560

[17] Brusset, E. et al., *Measuring Peace Impact: Challenges and Solutions* (SIPRI, Stockholm: November 2022)

idea of a social contract, which is rather hierarchical in nature. The two concepts have evolved to underpin the belief that a country is fragile if its society is built on a weak social contract (Kaplan, 2014). Effective states that ensure equal access to public goods to all segments of their population are important for the emergence of a strong, cohesive society. The same is true in the opposite direction, that the state's performance can be conditioned on its interaction with a given society making the state-citizen relation reciprocal (Besley, 2022).

This paper builds on several earlier works that review fragility indices and also expands on other similar efforts that relate to the measurement of governance and conflict. Ferreira, I. (2016) discussed the need for a more solid theoretical foundation of the concept. Scholars agree that a move away from single aggregate ranking to identifying relevant dimensions will help better reflect the heterogeneity among fragile countries, but exactly what those dimensions should credibly capture remains a debate. To date there has been only one study that systematically analyzed strengths and weaknesses of fragility measures for their use in quantitative research (Ziaja, 2012). The author points out the issues of definitional discrepancies and ultimately finds that comprehensive indicators (those measures that aim to capture all possible characteristics) are not suitable for analysts that wish to investigate causes and consequences of fragility.

These studies are a good step forward in critically assessing the fragility measures, but a rapidly evolving literature on fragility and novel ways of capturing the observed heterogeneity among fragile countries prompt new inquiries into their methodological and analytical utility. The surge of indicators created the momentum of generating more and better data. It is important then to underline that against a good number of fragility indices and various approaches we have available today it would likely complicate than aid to believe that there is some distinct advantage in one measure over the others or that, in plain terms, one measure is better than another. It does seem intuitive to assume so and while there is always room for improvement in defining the concept and measuring it, in the end, the choice of an index depends on the rationale behind the selected definition and the analytical aim of applying that construct.

A common framework for understanding fragility measures

1. Overview of data

Table 1. lists most widely used fragility indices and their producers. Fragility datasets mentioned in the table are all provided at a country level.

Table 1 Fragility measures and data producers[18]

no	index	producer	type	time coverage	frequency	no of countries	availability
1	BTI-WS	Bertelsmann Stiftung	international organization	2006-2022	bi-annual	137	open
2	CIFP Fragility Index	Carleton University	university	2015-2022[19]	annual	192	proprietary
3	Fragile States Index	Fund for Peace	think tank	2007-2023	annual	179	open
4	Index of State Weakness	Brookings Institution	think tank	2008	n/a	141	open
5	IDA Resource Allocation Index (CPIA)	World Bank	international organization	2006-2020	annual	75	open
6	Political Instability Index	Economist Intelligence Unit	international organization	1996-2021	annual	global	proprietary
7	WGI Political Stability	World Bank	international organization	1996–2021	annual	global	open
8	States of Fragility	Organisation for Economic Co-operation and Development	international organization	2015, 2016-2022	bi-annual	global	open
9	Constellations of State Fragility	German Development Institute	think tank	2005-2015	annual	176	open
10	State Fragility Index	George Mason University	university	1995, 2001, 2007-2009	n/a	162	discontinued
11	PCIL Risk Ratio	University of Maryland	university	2008, 2010	n/a	160	discontinued
12	International Country Risk Guide (ICRG) rating	PRS Group (Political Risk Services Group)	commercial	1984-2013	monthly	141	proprietary

Source: adapted by authors with updates from Ziaja (2012). For completeness, the discontinued State Fragility Index and PCIL Risk Ratio are included. The PRS ICRG numbers are included here, though it is not included in the analysis that follows as the paywall complicates analysis of methodology.

[18] Early warning and conflict forecasting may be related to some concepts of fragility i.e., a country at "risk of political violence". Examples included INFORM from the European Commission (annual coverage of 191 countries from 2012 – 2022) and Conflict Forecast by Mueller and Rauh (monthly forecasting for 180 countries since 2021). The recently released ACLED's Conflict Index ranks violent conflict levels for all countries building on analysis of political violence recorded for the past year. See more https://acleddata.com/acled-conflict-index-mid-year-update/

[19] CIFP's State Fragility Index is also available periodically for previous years. Carment, D., & Samy, Y. (2019). *Exiting the fragility trap: Rethinking our approach to the world's most fragile states*. Ohio University Press provide more clarity about the updated CIFP database.

Table 2 Overview of fragility measures

no	index name	definition	Resonant (dimensions)	Parsimonious (no of indicators)	Theoretically grounded	logically Coherent (conceptual linkage)	methodology	score ranking	notes
1	*BTI-WS*	"comprehensive and politically driven change in which an authoritarian system and a state-dominated or clientelist economic order evolve in the direction of democracy and a market-based economy"	political transformation economic transformation quality of governance	52	state-centric view of social change	state of *transformation* quality *governance*	average of total scores per each dimension	1-10	also measures trend (direction of progress/regress)
2	*CIFP Fragility Index*	"fragility is a measure of the extent to which the actual institutions, functions, and processes of a state fail to accord with the strong image of a sovereign state, the one reified in both state theory and international law"	authority legitimacy capacity	78	institutionalist approach (Weberian idea of state)	authority legitimacy capacity	relative structural assessment building on average scores across clusters	1-9	
3	*Fragile States Index*	"A state that is failing has several attributes. One of the most common is the loss of physical control of its territory or a monopoly on the legitimate use of force. Other attributes of state failure include the erosion of legitimate authority to make collective decisions, an inability to provide reasonable public services, and the inability to interact with other states as a full member of the international community"	cohesion economic political social	12	state resilience to social, economic and political pressures (theoretical basis is not formally specified)	fragile states	Conflict Assessment System Tool (CAST) analytical approach	0-10	launched a new States Resilience Index (SRI); FFP seeks to predict conflict, instability, and state failure
4	*Index of State Weakness*	"countries that lack the essential capacity and/or will to fulfil four sets of critical government responsibilities: fostering an environment conducive to sustainable and equitable economic growth; establishing and maintaining legitimate, transparent, and accountable political institutions; securing their populations from violent conflict and controlling their territory; and meeting the basic human needs of their population"	economic political security social welfare	20	statehood view	weak states	average of total scores per each dimension	0-10	

5	*IDA Resource Allocation Index (CPIA)*	"fragile states is the term used for countries facing particularly severe development challenges: weak institutional capacity, poor governance, and political instability. Often these countries experience ongoing violence as the residue of past severe conflict". (World Bank 2010)	economic management structural policies policies for social inclusion/equity public sector management and institutions	16	policy and institutionalist approach (not formally specified)	fragile states	benchmark based review process	1-6	
6	*WGI Political Stability*	"Political Stability and Absence of Violence/Terrorism perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism"	not specified	24	institutionalist approach (not formally specified)	probability of unconstitutional change of government	unobserved components model (UCM) - model with data-driven weighting scheme	0-100 percentile ranking	
7	*States of Fragility*	"fragility is the combination of exposure to risk and insufficient coping capacities of the state, system and/or communities to manage, absorb or mitigate those risks"	economic environmental human political security societal	51	institutionalist approach (not formally specified)	fragile contexts	two-stage PCA with a hierarchical clustering procedure	0-60 (for dimensions based rankings) & 0-100 (ranking across regions)	their clustering is neither predictive nor programmatic
8	*Constellations of State Fragility*	"fragility is constituted of deficiencies in one or more of three core functions of the state: violence control, implementation capacity, and empirical legitimacy"	violence control implementation capacity empirical legitimacy	10	state-society approach	authority legitimacy capacity	unsupervised learning technique	1-6	

Source: adapted by authors with updates from Ziaja (2012) and Ferreira (2016)

2. Conceptualization and measurement

How adequately an index reflects the concept – a process of conceptualization – is hard to establish because of the abstract nature of a phenomenon like fragility. Gisselquist (2014) proposes a set of criteria that guides the index construction process in social science and instructs that the indices be *resonant* in reflecting what the concept aims to capture, *parsimonious* as well as *operational* in encompassing the relevant attributes of fragility (avoiding redundance and overlap in measurement), be *theoretically* grounded and logically *coherent*[20]. Table 2 above provides an overview of eight index initiatives and compares them against the described principles of constructing indices. Table 3 in this section below dives into the composition of the indices mapping out their conceptual dimensions. And Table 4 summarizes the number of indicators that fragility indices draw on across each dimension. Some indices we focus on in the tables were primarily established for other purposes than producing fragility rankings (e.g., CPIA or WB's Political Stability). But we choose to include them in our review because they are still widely used in literature as a proxy for fragility. Overall, we consider indices that are commonly used to describe fragility across countries, produce quantitative rankings and are still regularly published data initiatives.

That there is no clarity in the underlying idea or assumptions of the current fragility indices is again evident in the ways that the concept is defined and conceptualized. The selected eight institutions measure different outcomes of interest and describe fragile countries in a broad sense: four institutions focus largely on *fragile or weak states and contexts* (FSI-FFP, Brookings Institution, WB's CPIA, OECD), two focus on specifically defined *authority, legitimacy* and *capacity* as three dimensions of state fragility (Carleton University and German Development Institute), one on the *transformation and quality of governance* (Bertelsmann Stiftung) and one on *political instability* (WGI). Although almost all institutions document their data production through codebooks or methodology description, not all of them provide a thorough account of some of the key steps of building an index.

What is more challenging, however, is determining the benchmark against which the dimensions of fragility can be systematically compared for all countries. To extend the argumentation made in the current literature, a solid theoretical basis is pre-requisite to be able to explain, for instance, a minimal amount of provision of public goods or the adequate representation of large parts of the population that would be necessary to keep the country stable. At the same time, this apparent stability might, itself, be indicative of a context that is already fragile. Seemingly stable environment achieved through "adequate representation" of the population might, in reality, be a symptom of a small, disenfranchised minority that is not represented. The perceived "stability" becomes a form of oppression against that minority. In the end, this example presents a double-edged argument: what would work as a relevant measure of resilience in one country could be an indicator of fragility in another. Furthermore, as shown above in the Table 2, related to the issue of a common benchmark is also a matter of varied scoring systems across the indices and different cut-off points that the institutions apply. This, unsurprisingly, can lead to divergent classifications of countries.

A wide range of background concepts that are used in constructing indices, in the end, make up the building blocks or dimensions of fragility. To give example of the used concepts, in the *Table 3* we show

[20] Additionally, an extensive sourcebook "Goal 16 – The Indicators We Want: Virtual Network Sourcebook on Measuring Peace, Justice and Effective Institutions" provides important considerations and lessons learned for future indicator development in the fields of governance, peace and security that can be also applied to the field of fragility (e.g., recommendations on indicators being 'limited in number', relevant, simple and feasible).

only some indicators per each dimension. The purpose here is to unpack the dimensions and illustrate that the underlying indicators (variables) can vary a lot within dimensions. Further below, Table *4* is a numeric description of the number of indicators (variables) used per each dimension listed by fragility index producers. S*ecurity or violence control* and *economic* dimensions tend to be measured the most next to *political* and *social* dimensions. Overall, the lack of theoretical understanding of what constitutes fragility can explain different choices of indicators that reflect each dimension and poorly determined aggregation procedures. As a result, the key stage of selecting variables that should be predefined from a theoretical basis becomes almost an arbitrary choice. As is sometimes the case with constructing various indicators in the fields of development and economics, some fragility measures also risk becoming mashup indices[21].

Table 3 Conceptual dimensions of fragility and example of some corresponding indicators per each dimension[22]

Political	**Econom**	**Social**	**Governance**	**Security**	**Environm**	**Capacity**	**Legitimacy**
stateness	Socio-econom developmen t/barriers	human develop ment	public sector management and institutions	armed security officers	disaster risk	basic administra tion	asylums granted
political participation	organization of the market and competition	demogra phy		battle deaths	environmental performance	child mortality	press freedom
rule of law	private property	social inclusion		conflict risk	food insecurity	primary enrolment	human rights
stability of democratic institutions	welfare regime	cohesion		control over territory	government effectiveness	water access	
party system	tax paym			formal alliances	infectious diseases		
interest groups	monet & fisc policy						
	GDP			homicide rate			
	debt						
	foreign aid						
				impact of terrorism			

[21] For instance, prior to mostly Ravallion's efforts to push for standardized poverty measurement, it was described as mashup index due to its multiple aggregation and measurement problems (Ravallion, 2015).
[22] The listed dimensions in the Table *3* and *4* come out straight from the selected fragility datasets (as they are formulated and classified in the provided datasets) and are not generated by anyone else than the authoring institutions.

Table 4 Conceptual dimensions of fragility (by number of indicators used to measure each dimension)

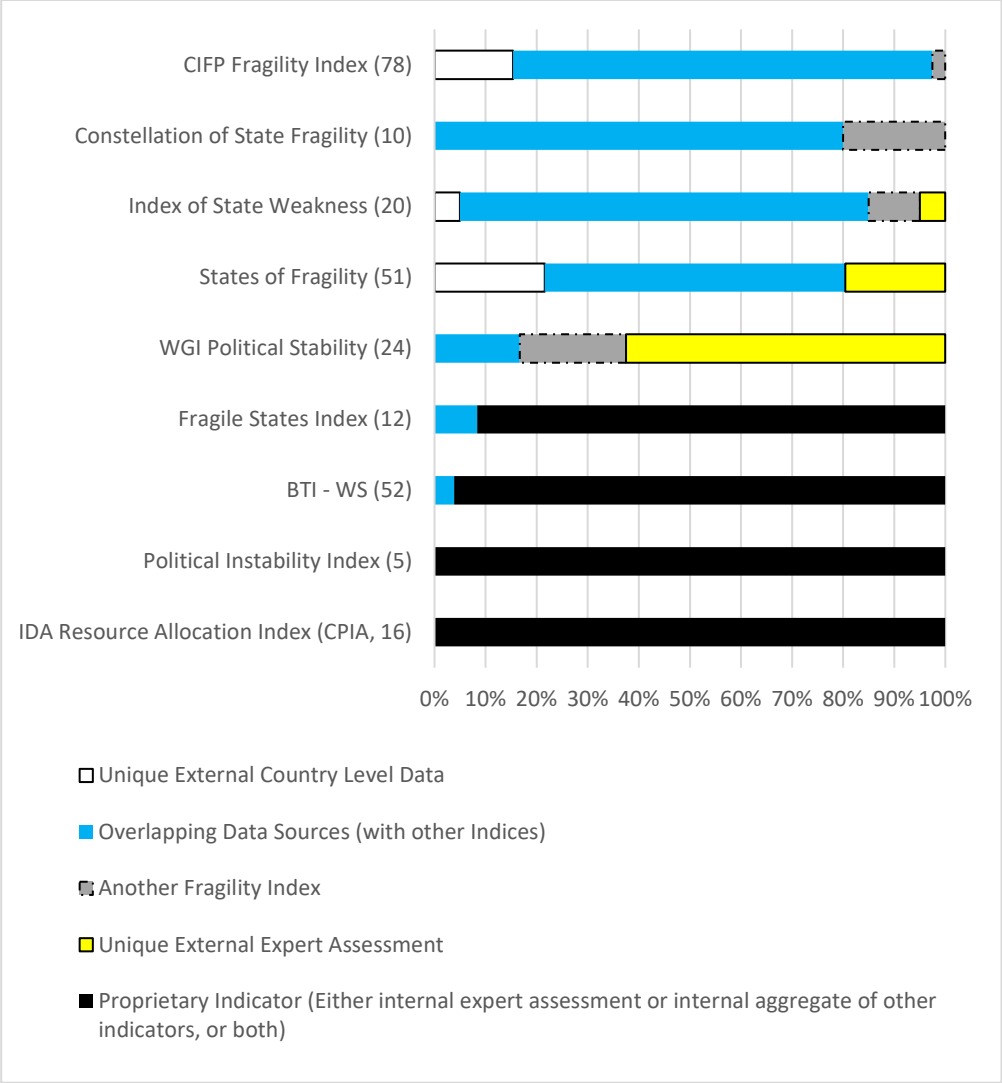
no	index name	politic	econ	govern	social	secur/viol. control	environ	capacity	legiti macy
1	BTI-WS	18	14	20	0	0	0	0	0
2	CIFP Fragility Index	0	24	12	27	10	10	0	0
3	Fragile States Index	3	3	0	6	0	0	0	0
4	Index of State Weakness	5	5	0	5	5	0	0	0
5	State Fragility Index	7	3	0	2	2	0	0	0
6	PCIL Risk Ratio	3	1	0	1	2	0	0	0
7	IDA Resource Allocation Index (CPIA)	0	3	8	5	0	0	0	0
8	Political Instability Index	12	3	0	0	0	0	0	0
9	WGI Political Stability	0	0	0	0	35	0	0	0
10	States of Fragility	10	12	0	8	12	9	0	0
11	Constellations of State Fragility	0	0	0	0	3	0	4	3
	total:	58	68	40	54	69	19	4	3

2.1. Noise problem

Figure *1* below presents the mapping exercise where we unpack nine indices and try to understand what lies behind these aggregate measures and, ultimately, what information we can expect the indices to yield us. Different colours in the Figure *1* represent the types of data sources that the listed fragility indices build on. We find that many indices rely on expert assessments. This may be considered a strength or a weakness. If national actors were not part of the expert assessment the scoring results may appear arbitrary or ungrounded. However, expert assessments can also be subjective and influence the results of the produced scores. Furthermore, many indices rely on the same data or the same underlying data, including through other indices or aggregate measures (see "overlapping data sources" coloured in blue). Among the overlapping data sources are data from the most widely used sources such as the United Nations, World Bank, World Development Indicators and Freedom House. It is probable to assume that most producers of fragility indices would unlikely reveal us something new when they draw on the same datasets and even the same indicators. It is also important to point out, then, that the number of indicators that the fragility indices build on varies considerably. For instance, much of what the Index of State Weakness (Brookings Institution) measures with the total of 20 indicators is already included in what the CIFP (Carleton University) measures with 78 indicators or the States of Fragility (OECD) does with 51 indicators.

In specifying the concept of fragility, the indices determine sub-groups (*dimensions*) and the corresponding variables at multiple levels that do not systematically compare across indices. For example, fragility dimensions of the BTI-WS index have one more layer of aggregation that are sub-dimensions, which means that the first-level dimensions are not directly measured by its constituent variables as they are in some other fragility indices like in WGI Political Stability, States of Fragility or Constellations of State Fragility. One more complexity here is that even at the underlying indicator level the fragility indices do not mean the same things. To give an example, the variable on *economic decline* or *uneven economic development* from Fragile States Index or *economic freedom* from CIFP include further sub-indicators and are not at the same level as any of the specified variables in Constellations of State Fragility. Aggregation steps become incompatible across indices.

Figure *1 Mapping out the fragility indices and their most widely used data sources.*



The mapping exercise further reveals that some fragility indices are interconnected with one another because in certain cases they build on other aggregate measures that, in the end, become a circular reference of the same indices (see "Another Fragility index" in Figure *1*). For instance, looking closer at the CIFP measure, it includes information from World Governance Indicators and Freedom House among other data. However, World Governance Indicators already draw on their data from Freedom House. Because CIFP's sub-components appear to be datasets that are already composed of each other, as a result, the CIFP index becomes a highly aggregate measure that has a double-counting problem. We illustrate this in a graph below (Figure 2) as an example of the hidden cross-reference issue between the indices where we see that CIFP counts data from FH twice because of including information from both WGI (that builds itself on the same FH sub-indicators) and FH.

Lastly, an important aspect often overlooked in the measurement efforts of fragility is that the direct comparisons of fragility over time and across countries may not always be accurate due to a time lag in the assessment period and the release of the ratings. For instance, the BTI rankings are bi-annual releases that are based on information collected in the preceding years. Therefore, there is roughly a two-year time lag between the data collection period and the release of the ratings meaning that any reform efforts a country undertakes may not be accordingly and timely reflected in the BTI scores for the reported year. Especially for countries with unstable political developments or frequent changes in government, the reported assessments might be skewed and reflect the previous government office. The possibility of a time lag problem may lead us to question the relevance of other composite measures of fragility that build on pre-existing indicators that are also published every two years. Ultimately, overall fragility scores of countries might be driven by changes in other sub-indicators at different points in time that, in reality, may not necessarily be associated with the referenced policies or institutional settings.

Both double-counting and time-lag in data can affect the construction of an overall composite index and the results obtained. Time-lagged data can influence the weight assigned to an indicator. If data for a particular indicator is not up to date it might receive less weight than the indicator with the most recent data that provides a more accurate reflection of the current situation. Other cases that double-count information through multiple sources in a composite index also end up assigning higher weights to indicators that, in reality, are counted more than once, even if the index purports to be "neutral".

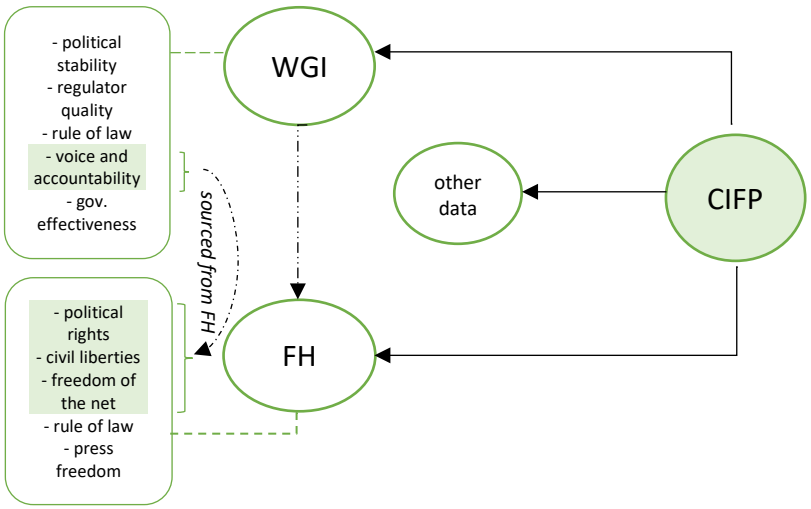


Figure 2 Example illustrating the interconnection between the CIFP index and some of its sub-indicators

3. Aggregation

Recent advances have been made to address multi-dimensionality of fragility, for instance, as proposed by the 2015 OECD's States of Fragility report[23]. However, determining sub-groups of a multi-dimensional concept has received little or no attention among scholars and major data producers. Because fragility is not easy to define and measure, there is not always a clear link between the theoretical framework and the structure of the composite indices. Tables *3* and *4* above showed that fragility can be conceptually divided into several groups: political, economic, social, or environmental aspects of government, security, governance or institutional capacity, and legitimacy. Despite being grouped into these dimensions, the individual indicators are not always logically related to the identified sub-groups (logical *coherence* of the RPOTC criteria). Holding no agreement about which dimensions should be measured and lack of consistency with the core concept does not make the concept operational and leads to including all possible and most likely different variables in order to measure the same dimension[24]. At the same time, while still important and indeed necessary, there may also be a danger in becoming too expansive in reflecting multi-dimensionality.

Methodologically, a multi-dimensional concept involves aggregating multiple (sub-)categories and indicators into a composite index. Scholars emphasize the issue of aggregating different values, weighting decisions, the relationship among the constituent indicators and how some hidden assumptions can lead to aggregating variables that can yield any results (Gutiérrez Sanín, 2009). In the context of multi-dimensional indices there is common agreement in methodological literature that aggregation is particularly problematic because it requires a strong justification for why a loss in one variable can be compensated by an improvement in another indicator. Ziaja (2012) critically reflects on the issue of non-comparability among different concepts, questions more concretely about, for example, which degree of child mortality compensates for which level of corruption, and the difficulty of making such considerations for multi-dimensional indices. Overall, in confronting the challenges of multi-dimensionality of fragility it is important to recognize that the problems of oversimplification, lost nuances, insights, and obscure weighting decisions will likely persist.

4. The issue of cause and consequence

Current practices of building fragility indices that are common among both institutions and scholars show different perspectives on the fragility dimensions. Some have thematic focus on the sectors of service delivery and include social, political, economic, environmental dimensions. The issue with this perspective is that these concepts are often understood as the outcomes of weak governance, state fragility and failure. Others rely on rather structural aspects of government and measure countries' capacity and state legitimacy. Compared to the institutions that apply the former perspective in producing fragility indices scholars have been increasingly arguing for the latter approach as it does not conflate causes, consequences or symptoms of fragility and instead adopts a less biased perspective (Ziaja 2012, Call 2011, Carment et al 2009).

In principle, if conclusions from the basic assessment of data and measurement procedure permit, the indices should allow for addressing more analytical inquiries into causes and consequences of fragility. Not all indices under review are suitable for more scholarly research. Some of the key fundamentals of social science methodology require that the ability to investigate causal mechanisms be premised on a strong theoretical basis and a parsimonious definition (Ziaja 2012, Gisselquist 2014). It is admittedly hard to determine the minimum number of indicators required for measuring a concept when there is

[23] https://www.oecd.org/dac/conflict-fragility-resilience/sfr-multidimensional-fragility-framework.htm

[24] The Worldwide Governance Indicators is an example of an attempt to reconcile this issue in measuring governance.

a long-standing critique of problematic definition and apparent lack of consensus on the theoretical foundation of the concept. It also becomes tempting to claim that merely drawing on over twenty indicators for a single index would be value-laden and too redundant for constructing a valid measure appropriate for hypothesis testing. However, as we demonstrated earlier, there is a clear conceptual overlap between some indices that draw on the same indicators as well as others creating a double-counting problem or others that are not telling us new information because of the hidden cross-references between some indices and their sub-indicators. While some indices might be useful for certain purposes, they might be irrelevant for academic purpose of investigating the causal relationship (e.g., CIFP, WGI Political Stability, Index of State Weakness or States of Fragility).

5. Functioning role of fragility indices

In broader studies of peace, conflict, or development some indices are explicitly designed to provide periodic forecasts of political violence, build scenarios of future development trends or incidents of armed conflict[25]. While the instinct to generate such predictions on state fragility seems plausible it would be difficult to explain theoretically. Ikpe (2007) argues that state fragility characteristics have limited predictive value because the interplay between external threats and structural factors is too complex for accurate projections to be feasible. Yet, some institutions still measure future trends of development (e.g., Bertelsmann Stiftung) or predict conflict, instability and state failure as shown by the Fund for Peace (FFP)'s most recent launch of the States Resilience Index (SRI). Those indices that attempt to generate scenarios around 'early warning and assessment' mostly focus on proneness to instability and internal conflict thereby underplaying other structural factors like inadequate development levels or insufficient provision of public services (Rice and Patrick 2008). Even then, structural factors can only partly explain development and security outcomes since these are often subject to exogenous factors and triggering events (Ikpe 2007).

Moreover, forecasting studies tend to amass large and increasing amount of data mostly applying advanced tools like machine learning in order to make timely predictions of large-scale political violence, food crises or other shocks. In contrast to such quantitative predictions, there is another category of rather subjective indices that are based on expert assessments. These indices, which most of the fragility measures represent in this context, depart from the quantitative projections of the future and instead point to contextual knowledge and participation of broader stakeholders. Such indices gathered from survey data carry an important but paradoxical task of developing categories of local knowledge about fragility that manifests itself differently across different places and that yet have 'trans-local' meanings in order to make comparisons possible across the borders (Rottenburg, R. & Merry, S., 2015). Scholars and practitioners generally agree that this tension is best mediated by looking beyond quantitative indices – predictive or evaluative – through deep dive case studies or quantitative analysis of more granular data.

6. Reference application

Beyond comparing fragility rankings across countries over time the concept has been examined from different angles and on several issues. Intended areas of application vary widely and much caution should be called for in interpreting any associations reported in the studies on how fragility relates to other concepts like growth, poverty, or inequalities. Fabra Mata and Ziaja (2009) reasonably question the validity of results, depending on the specific reference application of fragility measures. To describe broadly, scholars have studied how state fragility causes displacement, the effects of fragility on growth and poverty, implications of development aid on varieties of fragility, and the effect of economic

[25] Read more on conflict early warning systems in E.G. Rød, T. Gåsste and H. Hegre (2023), and on predicting food crises in Andree, B. P. J., Chamorro, A., Kraay, A., Spencer, P., & Wang, D. (2020).

contraction on entering and exiting from state fragility (Akanbi et al 2021, Martin-Shields 2017, Gisselquist et al 2017, Ferreira 2018, Carment et al 2020). Most of the mentioned studies tend to rely on the CPIA index. However, one issue is that CPIA already incorporates an indicator called "policies for social equity and inclusion" among others, which does not fit neatly into conducting deeper studies of, for instance, whether and how a change in different levels of fragility can be attributed to certain types of either inequalities or social cohesion.

Another issue is that the current literature mostly rests on exploratory studies, and conducting empirical research on the mechanisms of causal relationships requires the use of more rigorous measures. This principle aligns away from how most indices under the review here are constructed. For instance, measures like BTI-WS, CPIA, or OECD that build on multiple dimensions capturing economic, social or political processes have been primarily established as a framework for mapping out the levels of fragility or assessing countries' absorptive capacity for development aid, but they do not exactly allow for specifying how different stressors impact a country's level of fragility. Zulueta-Fülscher, K (2014) focuses on democratization processes and the effectiveness of democracy-support policies in fragile countries and concludes that the subsets of quantitative literature on democratization and the effectiveness of aid need to catch up with the rapidly evolving literature on fragility. Specifically, she argues that the broader literature on political transformation and the effectiveness of democracy-support policies does not align with heterogenous nature of fragility and that overlooking it might have serious theoretical and practical implications for policy design.

Current classifications

This section presents a comparison of four selected fragility indices with the purpose of illustrating the resulted listings coming out of different definitions and ways of measuring fragility. For this exercise, specifically, IDA (CPIA), SFC, BTI-WS and FSI were chosen for their data availability and biggest country coverage. Table 5 below lists most fragile countries in 2014 across the selected indices. Highlighted in red are countries that are also identified by at least one of the other indices and, ultimately, indicating the general overlap across IDA (CPIA), SFC, BTI-WS and FSI. Afghanistan, Sudan and Yemen are listed in top 10 countries by all four indices, while Central African Republic, South Sudan, Somalia, Congo DR, and Yemen are ranked by at least three of them. Overall, there is a bigger overlap between BTI-WS and FSI. Remarkable is that given this overlap BTI-WS and FSI draw their assessments of fragile countries from different data sources. Interesting cases are countries left unhighlighted reflecting the divergence of classifications. Here SFC stands out among the indices as it includes most countries that are not listed as fragile in the other rankings.

Lastly, country comparisons reported in the Table *5* ought to be interpreted with caution and with at least two important things in mind. One is a technical aspect of the indices that build on different ranking scores. For this exercise the scale was standardized to be able to draw country comparisons across indices. And one is a practical choice for this study to present top 30 countries in the table. What the table does not display is that in the instance of a higher cut-off (e.g., screening the top 40 most fragile countries) the resulted list would be showing a bigger overlap of countries across indices. Therefore, the shorter the list the smaller the overlap.

Table 5 Country rankings according to different indices of state fragility

Bertelsmann Stiftung (BTI-WS), 2014	Fragile States Index (FSI), 2014	IDA Resource Allocation Index (CPIA), 2014[26]	State Fragility Constellations (SFC), 2014
Somalia	South Sudan	Eritrea	Afghanistan
Eritrea	Somalia	Sudan	Central African Republic
North Korea	Central African Republic	Central African Republic	Congo, Dem. Rep.
Syria	Sudan	Guinea-Bissau	Iraq
Myanmar	Chad	Afghanistan	Libya
Sudan	Afghanistan	Zimbabwe	Somalia
Afghanistan	Yemen, Rep.	Chad	South Sudan
Iran	Haiti	Comoros	Sudan
Yemen, Rep.	Pakistan	Haiti	Syria
Uzbekistan	Zimbabwe	Yemen, Rep.	Yemen, Rep.
Central African Republic	Guinea	Congo, Dem. Rep.	Bahamas
Chad	Iraq	Togo	Belize
Turkmenistan	Cote d'Ivoire	Guinea	Brazil
Haiti	Syria	Congo, Rep.	Colombia
Tajikistan	Nigeria	Djibouti	Dominican Republic
Pakistan	Kenya	Myanmar	El Salvador
Ethiopia	Ethiopia	Sao Tome and Principe	Guatemala
Congo, Rep.	Niger	Timor-Leste	Honduras
Lao PDR	Burundi	Liberia	Israel
Zimbabwe	Uganda	Madagascar	Jamaica
Iraq	Eritrea	Gambia, The	Lebanon
Mali	Liberia	Papua New Guinea	Lesotho
Cambodia	Myanmar	Pakistan	Mexico
Cuba	North Korea	Tajikistan	South Africa
Madagascar	Cameroon	Cameroon	Trinidad and Tobago
Belarus	Mauritania	Malawi	Ukraine
Saudi Arabia	Bangladesh	Maldives	Venezuela

To zoom in on divergencies in rankings it can be particularly interesting to single out SFC and FSI as two measures that depart the most from one another. Figure 3 below shows their comparison by income level groups[27]. Countries that are identified as fragile lie below zero. We observe that while the majority of them are low-income countries (coloured in blue) there are still, perhaps surprisingly, upper-middle income countries that are also deemed fragile by both measures[28]. These are countries as spatially diverse as Brazil, Mexico, Colombia, Algeria, Libya, Jordan, Iraq, Iran, Turkmenistan among others. It is important to highlight that while this somewhat heterogenous group of countries is found in a fragile group in the graph, they are not all equally fragile according to the SFC and FSI indices of comparison. These countries do not score exactly the same on both fragility rankings and even then, they are

[26] IRAI methodology includes only low-income countries, therefore, their sample does not cover all countries.
[27] We used WB classifications for income groups and for the summary in a scatterplot we grouped low and lower-middle income countries into one category.
[28] This is also in line with ACLED's most recent analysis of the rise in conflict in middle-income countries. See more: https://acleddata.com/conflict-index-january-2023/

identified fragile in line with corresponding definitions, which means that these countries are fragile in different ways.

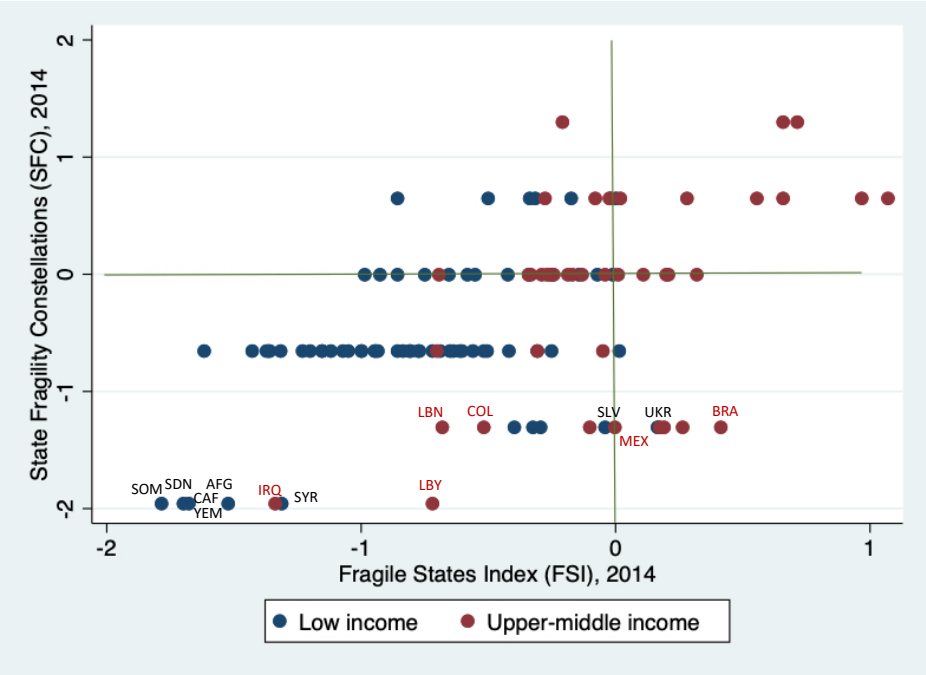


Figure 3 Comparing SFC and FSI by income groups in 2014.

Adopting a common framework and ways forward

This section turns to the task of drawing conclusions from the proposed RPOTC framework (resonant, parsimonious, operational, theoretically grounded, logically coherent). These conclusions are the key basis for further study on what possibly drives or impacts a country to become (more) fragile. To sharpen the point of this paper, there are different ways we define and measure what we understand to be fragile and there are many reasons why these indices are useful for. It is important to keep in mind that any fragility measurement that is created will not satisfy all uses at the same time and that some of them can have a relative advantage and distinct purpose. Therefore, there may be different motivations for the choice of a particular definition or methodological approach to fragility. Although most indices we examined here are well-established in the public debate, they hide many complexities and interconnections within them. Unpacking those indices shows that some of them are indeed forms of new information and that they communicate important signals for the users to know and act upon the resulted scores. Some others, however, are problematic for practical use due to the complex inter-connections among constituent indicators that, in the end, create noise in the information or encounter the problem of double-counting (e.g., CIFP, Index of State Weakness). Additionally, certain indices seem to serve as inputs for others (e.g., WGI Political Instability, EIU).

The RPOTC framework for thinking about fragility measures underscores the main principles of composite indicators that ought to be considered in assessing quality and relevance of a fragility index. Our review emphasizes that, fundamentally, what is measured in these fragility indices is what matters. As we demonstrated earlier, what most producers of fragility indices wish to measure is defined variably within their understanding of fragility, thereby setting the motivation for a variety of ways to use indices[29]. A sound theoretical basis is a starting point for any concept to be captured quantitatively. If

[29] refer to the definitions above in Table 2.

the underlying components of fragility do not align with what is being measured or if they do not logically form a coherent concept and are not theoretically defended, a fragility measure is not resonant, logically coherent or theoretically grounded. Furthermore, if there is noise in data due to double counting, cross-reference issues, the index is not considered operational or parsimonious.

Our framework is aimed to work as a guide to whether a certain index is relevant or not for a particular type of analysis. For explorative studies, descriptive overview or cross-country comparisons of fragility, the RPOTC framework recommends those indices that are multi-dimensional in specifying the concept and therefore may not necessarily be deemed parsimonious. For more inferential studies or deep dive analyses of causes and consequences of fragility the RPOTC framework suggests theoretically grounded, parsimonious, and coherent indices. These are also indices that are rather clean measures of what is understood to be fragility and do not have noise problems in underlying data. Furthermore, a particular index or the corresponding pillars of the definition (*dimensions*) might be more relevant depending on the needs of the users. For example, if one wishes to have a general understanding whether a certain government in a fragile country has the political will and is committed to a reform process, measures like BTI might serve a better purpose for understanding important aspects like the quality and changes in governance. Or more precisely, one may want to focus on the "governance" dimension of the BTI index in order to gauge the government's consensus-building or steering capability and international cooperation.

If a donor agency gives more emphasis to the role of social cohesion in their understanding of countries that are fragile, it seems relevant to turn to a cohesion dimension of Fragile States Index (Fund for Peace), that measures security apparatus, fractionalized elites, and group grievances. Furthermore, if rising concerns about extreme climate conditions is what triggers a country to become fragile according to other actors, they may want to refer to the environmental dimension of the OECD's States of Fragility or the European Commission's INFORM Risk Index that measures humanitarian crises and disasters. Similarly, if a risk of political violence and internal armed conflict is a more important trigger of fragility a recent initiative on Conflict Forecast provides regular updates of outbreaks of conflict. Therefore, any indices we construct will serve some of the purposes better or will not serve any of them at all.

Behind different ways of creating a fragility index, there is an implicit assumption about the "idea of a state" and what characteristics of a state are deemed important when choosing underlying variables. Aggregating multiple variables into a composite score of a state that is fragile is effectively projecting on to every state a normative view or a certain model idea of what an improvement in a given country looks like and what a country should aspire to. As a more actionable and concrete suggestion, policy-makers and practitioners working in these complex environments can take advantage of all existing indicators, collaborate with like-minded actors, both at the national and international levels, and conduct a SWOT analysis that includes a comprehensive assessment of strengths, weaknesses, opportunities, and threats. The focus should shift from relying solely on composite indices that hide many complexities within them to defining the actor's own idea of the optimal state and identifying areas for improvement in a given context. This approach makes the underlying data still useful for strategic planning and the commitment necessary for sustainable development[30].

Moving beyond the quantified measures of fragility understanding varied contexts is crucial for unpacking complexities and theoretical assumptions that go into the making of these indices. To understand quantification and to be able to unpack what it truly means, for example, for a population in a given country to make progress on the rule of law it is necessary to bring a more contextual

[30] This approach aligns with country "fragility assessments" put forth by the g7+. Sierra Leone, Somalia, Liberia, and Timor-Leste are some of the successful cases of these assessments.

knowledge to the fragility indices. Scholars that study various indicators across disciplines throw light on the important inquiries about the role of those who are doing the interpretation of indices, their convictions, interests, and stakeholder engagement because these so-called social factors are crucial in the process of interpretation of indices (Rottenburg, R. & Merry, S., 2015). This principle is well illustrated by Woolcock and Milante (2017) in their argument of incorporating qualitative insights in the last stage of their proposed approach to identifying fragile countries. As the authors explain, the goal is that country case studies would engage those with decision-making power in a country-wide discussion thereby building a more context-specific approach to informed policy-making.

Conclusion

This paper tried to explain some of the main reasons why the fragility community remains invested in the concept, offered a way to understand the information we get from different indices as well as how to use them. In summary, there are important reasons why fragility indices acquired a core place in policy-making and scholarly research. In some cases, these indices serve as virtue-signaling among the development actors about the ongoing efforts in a country, in other cases, they are used for the purposes of determining aid allocation, for identifying other partners in the donor community, or as an entry point for establishing a political dialogue, or an opportunity to understand the level of commitment from local governments in undertaking reforms or setting policy priorities. These reasons may also explain why there are different ways we define what is fragile and give incentives for development organizations and academic institutions to produce fragility measures. To be able to obtain meaningful information that is most up to date, distinguish noise from signals, or avoid double-counting problems, depending on its use, a particular index or its certain dimensions might serve a better purpose for addressing certain types of questions. Overall, the efforts to measure fragility have been gradually improving and although it is inherently difficult to create fragility indices that aptly capture multiple dimensions, they will continue to be a source of lively debate in the future. Fragility is an evolving concept which will likely continue to manifest changed behavior and patterns thereby advancing our theoretical understanding.

Appendix A

The table 1. below lists country rankings across different indices by order. It is necessary to highlight that the list should be interpreted considering certain logical decisions made in generating this rankings list. The scale was standardized across all four indices. In case of the State Fragility Constellations (SFC) index, original classification resulted in countries being ultimately assigned a categorical value. This means that when normalizing the scale, a set of countries belonging to the same category (e.g., countries with 'low-capacity' (C) in the original dataset) took on the value '3'. In the end, this group of countries would get the same new standardized value. For comparing the country rankings across indices, we grouped countries by ranking number and alphabetic order.

Table 1 Full list of country rankings according to different indices

country	Bertelsmann Stiftung (BTI-WS), 2014	Fragile States Index (FSI), 2014	IDA Resource Allocation Index (CPIA), 2014	State Fragility Constellations (SFC), 2014
Afghanistan	7	6	5	1
Albania	89	113		73
Algeria	48	64		74
Angola	32	40		28
Argentina	93	132		110
Armenia	65	96		75
Australia		156		131
Austria		154		132
Azerbaijan	39	70		76
Bahamas		122		11
Bahrain	52	111		77
Bangladesh	63	27	37	29
Barbados		126		111
Belarus	26	83		78
Belgium		151		133
Belize		105		12
Benin	85	67	47	30
Bhutan	64	58	57	79
Bolivia	88	63	51	112
Bosnia and Herzegovina	86	79		134
Botswana	109	112		113
Brazil	110	114		13
Brunei				170
Bulgaria	113	121		135
Burkina Faso	43	36	53	31
Burundi	30	19	30	32
Cabo Verde			62	114
Cambodia	23	37	44	80
Cameroon	31	25	25	33
Canada		155		136

Cape Verde		85		
Central African Republic	11	3	3	2
Chad	12	5	7	34
Chile	119	140		137
China	45	61		81
Colombia	90	54		14
Comoros		49	8	35
Congo, Dem. Rep.			11	3
Congo, Rep.	18		14	36
Costa Rica	117	128		115
Cote d'Ivoire		13	28	37
Croatia	114	124		138
Cuba	24	99		82
Cyprus		103		139
Czech Republic	125	141		140
Denmark		163		141
Djibouti		42	15	38
Dominican Republic	84	87		15
Ecuador	62	72		83
Egypt	40	29		84
El Salvador	102	92		16
Equatorial Guinea		47		39
Eritrea	2	21	1	40
Estonia	124	134		142
Ethiopia	17	17	45	41
Fiji		62		85
Finland		165		143
France		147		144
Gabon		91		42
Gambia, The			21	43
Georgia	78	57		116
Germany		152		145
Ghana	104	100	36	44
Greece		125		146
Grenada		109	46	
Guatemala	49	60		17
Guinea	37	11	13	45
Guinea-Bissau			4	46
Guyana		98	33	117
Haiti	14	8	9	47
Honduras	72	69	41	18
Hungary	111	129		147
Iceland		158		148

India	101	74		48
Indonesia	92	75		86
Iran	8	41		87
Iraq	21	12		4
Ireland		157		149
Israel				19
Italy		135		150
Jamaica	98	110		20
Japan		144		151
Jordan	47	76		88
Kazakhstan	46	102		89
Kenya	68	16	61	49
Kosovo	80			
Kuwait	73	116		90
Kyrgyz Republic	61	53	50	91
Lao PDR	19		34	50
Laos		51		
Latvia	115	130		152
Lebanon	75	43		21
Lesotho	56	65	32	22
Liberia	55	22	19	51
Libya	36	38		5
Lithuania	120	136		153
Luxembourg		159		154
Macedonia	100	107		92
Madagascar	25	55	20	52
Malawi	69	35	26	53
Malaysia	83	108		93
Maldives		81	27	94
Mali	22	34	35	54
Malta		138		155
Mauritania	28	26	39	55
Mauritius	112	133		118
Mexico	94	97		23
Moldova	82	82	59	119
Mongolia	87	117	29	120
Montenegro	105	119		156
Morocco	33	84		95
Mozambique	57	46	52	56
Myanmar	5	23	16	57
Namibia	97	95		121
Nepal	29	30	40	58
Netherlands		153		157

New Zealand		160		158
Nicaragua	59	66	54	122
Niger	51	18	42	59
Nigeria	44	15	49	60
North Korea	3	24		96
North Macedonia				97
Norway		162		159
Oman	42	123		98
Pakistan	16	9	23	61
Panama	96	120		123
Papua New Guinea	58	52	22	62
Paraguay	77	94		124
Peru	95	89		125
Philippines	91	48		63
Poland	122	139		160
Portugal		149		161
Qatar	79	127		99
Romania	108	118		
Russia	50	78		100
Rwanda	41	32	63	64
Sao Tome and Principe		80	17	
Saudi Arabia	27	88		101
Senegal	76	56	60	65
Serbia	107	93		102
Sierra Leone	53	33	31	66
Singapore	103	145		162
Slovakia	118			163
Slovenia	121	150		164
Somalia	1	2		6
South Africa	99	106		24
South Korea	116	143		165
South Sudan		1		7
Spain		137		166
Sri Lanka	60	28	48	103
Sudan	6	4	2	8
Suriname		101		126
Sweden		164		167
Switzerland		161		168
Syria	4	14		9
Taiwan	126			
Tajikistan	15	50	24	104
Tanzania	54	59	56	67
Thailand	66	73		105

Timor-Leste		31	18	127
Togo	34	39	12	68
Trinidad and Tobago		115		25
Tunisia	67	71		128
Turkey	106	86		106
Turkmenistan	13	68		69
USA				129
Uganda	81	20	55	70
Ukraine	70	104		26
United Arab Emirates	74	131		107
United Kingdom		148		169
United States		146		
Uruguay	123	142		130
Uzbekistan	10	44	38	108
Venezuela	35	77		27
Vietnam	38	90	58	109
Yemen		7		
Yemen, Rep.	9		10	10
Zambia	71	45	43	71
Zimbabwe	20	10	6	72

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