The CIFP Fragility Index: New Trends and Categorizations

A 2017 Country Indicators for Foreign Policy Report

Prepared by:

David Carment
Peter Tikuisis
Yiagadeesen Samy
James Floch

Country Indicators for Foreign Policy
www.carleton.ca/cifp

Norman Paterson School of International Affairs
Carleton University
Ottawa

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Correspondence: David Carment, Principal Investigator, Country Indicators for Foreign Policy, The Norman Paterson School of International Affairs, Carleton University E-mail: david_carment@carleton.ca, cifp@carleton.ca.

List of Acronyms

ALC   Authority-Legitimacy-Capacity

CIFP   Country Indicators for Foreign Policy

FCAS   Fragile and Conflict-Affected States

FI   Fragility Index

LICs   Low Income Countries

MDGs   Millennium Development Goals

MENA   Middle East and North Africa

SDGs   Sustainable Development Goals

Executive Summary

Fragile and Conflict-Affected States (FCAS) remain more relevant than ever. After a brief period of declining fragility coinciding with a slow economic recovery since the 2008 global financial crisis, conflicts, violence and fragility are on the rise again. In the last decade or so, we have seen an increase in armed conflicts and violence around the world, a worrying reversal from the trend observed since the end of the Cold War in the early 1990s. Specifically, conflicts in the Middle East and North Africa (MENA) region – in Iraq, Syria and Yemen – have imposed a heavy burden on civilians in terms of casualties and forced displacements. For the fourth consecutive year, South Sudan tops the list of most fragile, if not failed, states and is in an unenviable position that had been historically occupied by Somalia. Chad, Somalia, the Central African Republic and the Yemen Republic make up the top five. Ranks five to ten are occupied, in order, by Eritrea, Sudan, Mali, Afghanistan and Niger. Noteworthy among this list is Eritrea, which enters the top 10 for the first time this year, in line with a trend of global deterioration in its fragility score. This report also provides a methodology for tracking backsliding among states. Our analysis finds that there is a tendency for the some of the most fragile states to experience swings and oscillations in democratic performance over time, closely transitioning along the lower portion of a J-curve of stability vs. openness. It also illustrates the considerable transitional barrier that separates closed authoritative states, herein characterized as brittle, from open democratic states.

1.   Introduction

Fragile and Conflict-Affected States (FCAS) remain more relevant than ever. After a brief period of declining fragility coinciding with a slow economic recovery since the 2008 global financial crisis, conflicts, violence and fragility are on the rise again. In the last decade or so, we have seen an increase in armed conflicts and violence around the world, a worrying reversal from the trend observed since the end of the Cold War in the early 1990s. Specifically, conflicts in the Middle East and North Africa (MENA) region – in Iraq, Syria and Yemen – have imposed a heavy burden on civilians in terms of casualties and forced displacements.

The contrast between, on the one hand, global progress on poverty reduction and improvements on a range of social outcomes across the broader developing world, and ongoing challenges faced specifically by FCAS, on the other, could not be starker. On the plus side, the first Millennium Development Goal (MDG) to reduce the 1990 absolute poverty rate by half by 2015 was met five years ahead of schedule in 2010, in large part (though not only) because of impressive growth in China. The global absolute poverty rate has now declined, for the first time, to single digits (9.6%) as of 2015 (World Bank, 2016). The number of low-income countries has fallen by more than half to 31 since 2001 and significant improvements have also taken place in other MDGs related to universal primary education, child mortality and maternal health.

However, ongoing conflicts in Afghanistan and Iraq/Syria, the humanitarian crisis resulting from the war in Yemen, anti-Muslim violence against the Rohingya minority in Myanmar, civil war in South Sudan, and political uncertainty in the Democratic Republic of Congo (and perhaps a sign of more violence to come if national elections are delayed further) are some of the examples that come to mind when thinking about FCAS. There are still too many people (around 700 million) living in absolute poverty today. Ending extreme poverty, which is the first Sustainable Development Goal (SDG), will become increasingly difficult as the absolute poor become more concentrated in FCAS.

The 2030 Agenda for Sustainable Development - 17 SDGs and 169 targets, including Goal 16 on "peace, justice and strong institutions" – is a much more ambitious agenda than the MDGs that it replaced in 2015. In the case of countries affected by conflict and fragility, and given the historical evidence about their lack of progress on the MDGs when compared to other countries, achieving these SDGs will be a challenge. Concretely, achieving stability and resilience in states that are trapped in fragility, for example,

Afghanistan, Burundi, the Democratic Republic of the Congo, Somalia, Sudan/South Sudan and Yemen, will require long-term engagement that spans decades. Even in places that have remained stable for a while, there is always a risk of backsliding when states are no longer able to exercise full control over their territory, when governments are no longer viewed as being legitimate by their populations, and when states lack the capacity to mobilize resources for productive ends.

This report provides an updated account of annual fragility rankings using the Country Indicators for Foreign Policy (CIFP) Fragility Index (FI) and its various sub-categories. CIFP's full methodology combines different levels of information – structural data, events-based data, and expert and field surveys to conduct retrospective and predictive assessments of countries. However, the focus of the current report is on structural data.

Conceptualizing Fragility[1]

The definition of fragility that we use in this report is based on the one used by the CIFP project (www.carleton.ca/cifp). Some states may be strong by some measures and weak by others; hence all states are fragile to some extent. A state's performance must be examined both in absolute terms and relative to other states as reference cases. And since these reference points are themselves evolving over time, it is important to understand that fragility is a relative term. According to CIFP's conceptualization, states are the main units of analysis and must exhibit the fundamental properties of authority, legitimacy and capacity (ALC) to function properly. States are affected by internal and external forces that are constantly changing over time and fragility measures the extent to which the actual characteristics of a state differ from their ideal situation. Weaknesses in one or more of the ALC dimensions will negatively impact the fragility of a particular state.

Authority measures the extent to which a state possesses the ability to enact binding legislation over its population, to control its territory and to provide core public goods and security to its population. For example, measures of authority include conflict intensity, government effectiveness and political stability. Legitimacy refers to the extent to which a particular government commands public loyalty to the governing regime and domestic support for its legislation and policy. Typical measures found under

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[1] For a full description of CIFP's methodology, see www.carleton.ca/cifp
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legitimacy include the level of democracy and voice and accountability. Capacity refers to the ability of the state to mobilize and use resources for productive ends. Capacity is measured by indicators such as GDP per capita, education and life expectancy.

The rest of this report proceeds as follows. In the next section, we discuss the latest fragility ranking produced by the CIFP project and the various dimensions of fragility. Section 3 discusses the categorization of countries using the state dimensions of A, L, and C that are further applied to reconstruct a depiction of stability vs. openness. Section 4 concludes with a summary of the main findings.

2.   Country Rankings

Table 1 contains the global fragility rankings (top 60) for 2016 based on a sample of 199 countries.[2] Overall fragility scores above 6.5 are color-coded in orange and are considered serious situations of fragility. In 2016, there are 25 countries in total that scored in this category. Countries performing at or around the median are color-coded in yellow, with fragility scores ranging from 3.5 to 6.5.

For the fourth consecutive year, South Sudan tops the list of most fragile countries with a score of 7.63, which has decreased slightly from a high of 7.92 in 2012. It is now clearly the world's most fragile, if not failed, state and is in an unenviable position that had been historically occupied by Somalia. Chad, Somalia, the Central African Republic and the Yemen Republic make up the top five, all with scores above 7.2. Ranks five to ten are occupied, in order, by Eritrea, Sudan, Mali, Afghanistan and Niger. Noteworthy among this list is Eritrea, who enters the top 10 for the first time this year, in line with a trend of global deterioration in its fragility score, from 6.38 in 2012 to 7.22 in 2015. Specifically, Eritrea's performance can be largely attributed to a significant deterioration in legitimacy scores over time due to its very poor track record on human rights, civil liberties and political rights. Thousands of Eritreans leave the country every month to avoid persecution from their government[3].

In keeping with the findings from previous years, many of the top 60 most fragile states are from sub-Saharan Africa, and Middle-East and North Africa regions. This is consistent with the discussion in the World Bank Group's "Pathways for Peace" (p.7) report which found that these regions have seen an

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[2] As has been past practice we draw on 2015 data with updates from the 2016 year. Accordingly we identify our rankings for the year 2016, the point at which we have the fullest amount of data for each country. We are currently working to update to the most recent data for our subsequent report.
[3] http://www.climatesignals.org/headlines/events/horn-africa-drought-2015

overall increase in violent conflict since 2014, a trend which is expected to continue into 2020[4]. Additionally, the rankings appear to approximate those from other sources, including the fragility matrix from the Center for Systemic Peace[5].

Overall, the mean fragility score for countries in the top 60 is 6.39, which represents a continuation of the upward trend since 2011 when it was 6.15. This appears to be in line with the slight overall mean increase in global fragility scores for the entirety of the sample, from a mean of 4.78 in 2014 to a mean of 4.82 in 2016.

Table 1: Global Fragility Ranking – 2016											
1	South Sudan	7.63	16	Liberia	6.65	31	Zimbabwe	6.39	46	Lesotho	5.94
2	Chad	7.60	17	Syria	6.65	32	Sierra Leone	6.39	47	Sao Tome & Principe	5.92
3	Somalia	7.45	18	Burkina Faso	6.64	33	Comoros	6.34	48	Tajikistan	5.90
4	Central African Rep.	7.39	19	Uganda	6.60	34	Togo	6.29	49	Madagascar	5.89
5	Yemen, Rep.	7.23	20	Nigeria	6.57	35	Angola	6.25	50	Swaziland	5.85
6	Eritrea	7.22	21	Haiti	6.57	36	West Bank & Gaza	6.20	51	Kyrgyzstan	5.85
7	Sudan	7.08	22	Gambia	6.57	37	Kenya	6.19	52	Senegal	5.81
8	Mali	7.00	23	Pakistan	6.54	38	Tanzania	6.15	53	Rwanda	5.77
9	Afghanistan	6.99	24	Cameroon	6.50	39	Myanmar	6.13	54	Laos	5.72
10	Niger	6.93	25	Mozambique	6.50	40	Equatorial Guinea	6.11	55	Lebanon	5.65
11	Burundi	6.85	26	Iraq	6.48	41	Malawi	6.07	56	Egypt	5.64
12	Guinea	6.80	27	Mauritania	6.48	42	Libya	6.05	57	Timor-Leste	5.60
13	Congo, Dem. Rep.	6.76	28	Cote d'Ivoire	6.42	43	Papua New Guinea	6.04	58	Gabon	5.59
14	Ethiopia	6.74	29	Djibouti	6.42	44	Benin	5.99	59	Iran	5.59
15	Guinea-Bissau	6.70	30	Congo, Rep.	6.41	45	Zambia	5.95	60	Bangladesh	5.58

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[4] https://openknowledge.worldbank.org/bitstream/handle/10986/28337/211162mm.pdf?sequence=2&isAllowed=y
[5] http://www.systemicpeace.org/inscr/SFImatrix2016c.pdf

Table 2: Highest Fragility Scores								
	2016			2015			2014	
1	South Sudan	7.63	South Sudan	7.76	South Sudan	7.83
2	Chad	7.60	Somalia	7.27	Somalia	7.43
3	Somalia	7.44	Central African Republic	7.24	Central African Republic	7.31
4	Central African Rep.	7.39	Yemen, Rep.	7.14	Afghanistan	7.23
5	Yemen Rep.	7.23	Sudan	7.12	Sudan	7.15
6	Eritrea	7.22	Afghanistan	7.08	Congo, Dem. Rep.	7.03
7	Sudan	7.08	Congo, Dem. Rep.	7.02	Yemen, Rep.	6.96
8	Mali	7.00	Chad	6.94	Chad	6.87
9	Afghanistan	6.99	Iraq	6.87	Guinea	6.79
10	Niger	6.93	Syria	6.84	Ethiopia	6.77
11	Burundi	6.85	Ethiopia	6.82	Mali	6.71
12	Guinea	6.80	Eritrea	6.77	Iraq	6.67
13	Congo, Dem. Rep.	6.76	Burundi	6.69	Syria	6.66
14	Ethiopia	6.74	Nigeria	6.64	Guinea-Bissau	6.65
15	Guinea-Bissau	6.70	Guinea	6.61	Pakistan	6.65
16	Liberia	6.65	Mali	6.58	Nigeria	6.64
17	Syria	6.65	Uganda	6.57	Eritrea	6.64
18	Burkina-Faso	6.64	West Bank and Gaza	6.56	Burundi	6.52
19	Uganda	6.60	Pakistan	6.50	Zimbabwe	6.52
20	Nigeria	6.57	Guinea-Bissau	6.49	Niger	6.52

Table 2 above provides a comparison of the top 20 fragile states for 2014, 2015 and 2016 each of which has fragility scores at 6.5 or above which indicates a very high-risk situation. The one exception is Guinea-Bissau which falls just below this threshold, as indicated by the yellow background. As referenced earlier, South Sudan has remained the world's most fragile country during this period. Others such as Burundi, Chad, the Democratic Republic of the Congo, Somalia and Yemen have been among the worst performers over extended periods of time, and are countries that we would characterize as being trapped in fragility. We should also note that there is not a big difference in the absolute value of the fragility scores of the worst performing countries (Top 5 or even Top 10) at any given point in time. However, when we examine the trends over time, we are able to see significant changes. For example, Chad, Mali and Syria have seen their fragility scores increase significantly from 2011 to 2016.

In the case of Chad, its fragility score increased from 6.68 in 2012 to 7.60 in 2016, placing it above the 7.5 threshold and thus classifying it as a seriously unstable and potentially failed state. Similarly, Mali has seen its fragility score deteriorate from 6.12 to 7.00 from 2012 to 2016. This is largely the result of ongoing armed insurgencies that started with the military coup in 2012. Despite the initiation of a UN-backed ceasefire agreement in 2015, hostilities in the country are ongoing, occasionally culminating in periodic firefights between Malian government forces, Tuareg rebels and Islamic militants[6]. In the case of Syria, between 2011 and 2016, its fragility score increased by almost one point, which is the largest increase observed among all countries during that time. This is evidently the result of the ongoing civil war which has continued to escalate during the period between 2014 and 2016. It is likely that Syria will remain very fragile until there is an end to the ongoing conflict. It is also noteworthy that despite its middle income status, Pakistan continues to struggle along several dimensions, a finding consistent with our most recent research (https://www.wider.unu.edu/publication/exiting-fragility-trap).
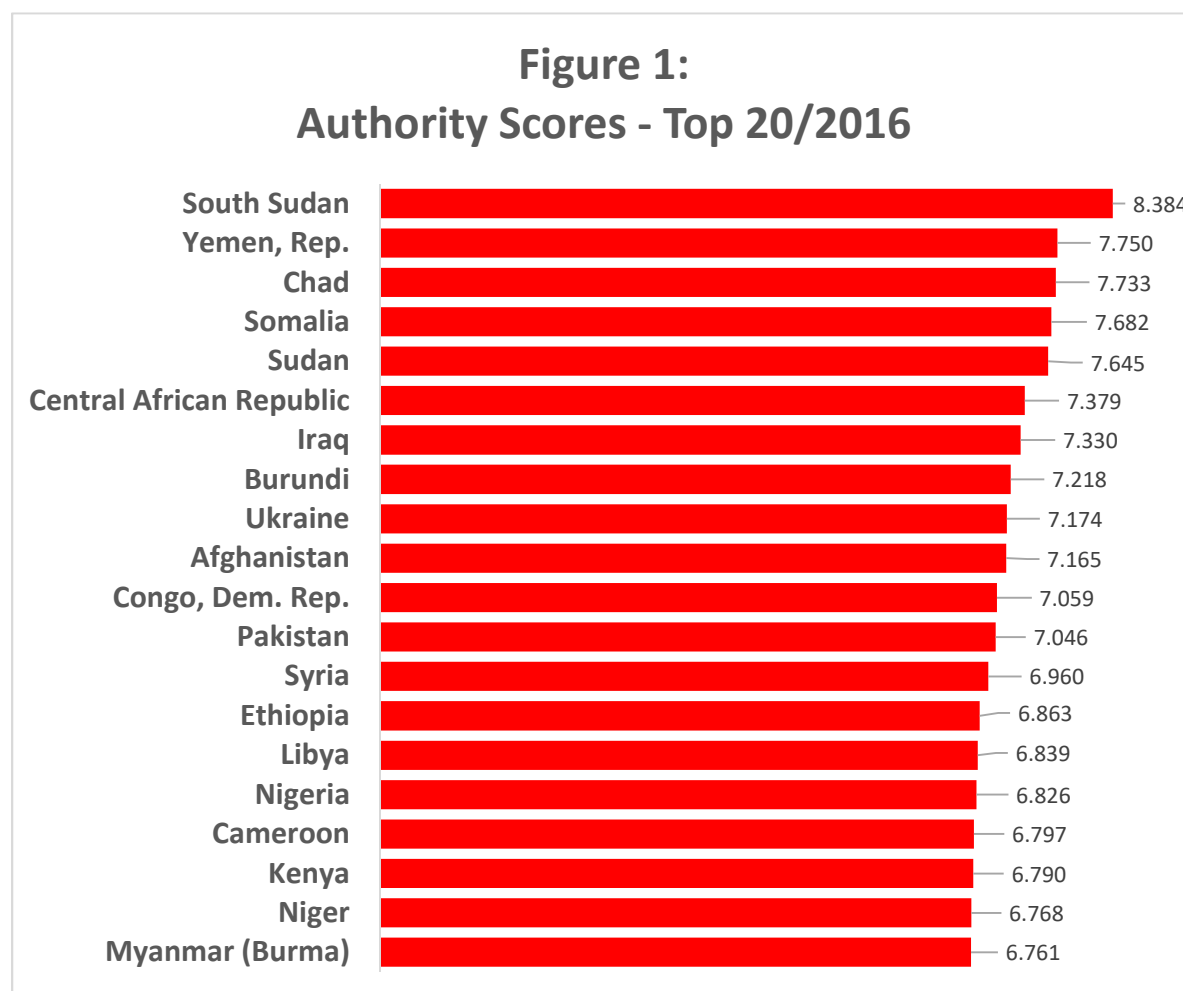
ALC Analysis

Authority

In 2016, the most authority-challenged state was South Sudan, with a score of 8.38 which represents an increase from 8.11 in 2014.   Following closely were the Yemen Republic, Chad, Somalia and Sudan, with scores ranging from 7.65 to 7.75. These countries have suffered from various levels of conflict intensity over time, which is why they do poorly on authority. The increase in Chad's fragility score referenced above can be traced largely to a significant deterioration in its authority score from 6.82 in 2014 to 7.73

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[6] https://betterworldcampaign.org/u-n-peacekeeping/mali-minusma/

in 2016, so that it is now the third most authority-challenged state. On the other hand, the Democratic Republic of Congo has seen an improvement in its authority ranking, decreasing from a high of 7.66 in 2014 to a score of 7.06 in 2016, the lowest authority score for that country since 2011. This has allowed it to move out of the top 10 authority-challenged states. We should note the presence of Ukraine among this group of countries, which is quite high on the list when compared to previous years, and Pakistan despite no large-scale conflicts, but significant terrorism-related incidents.
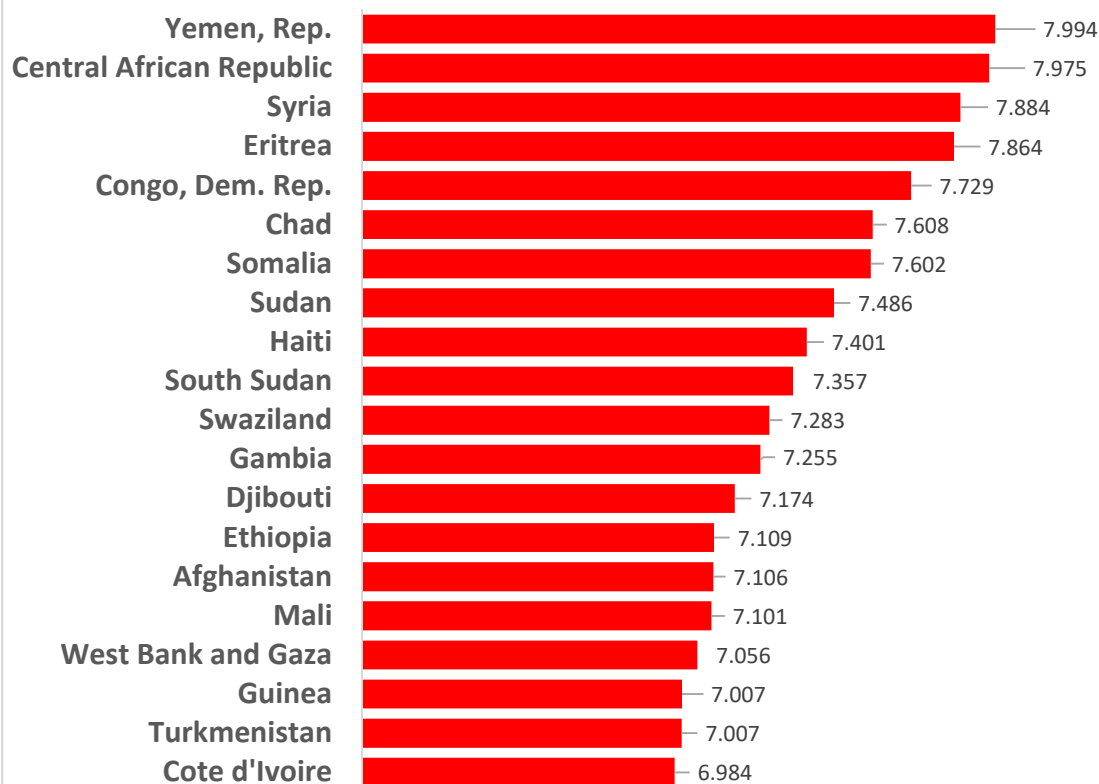
states.

Figure 1:
Authority Scores - Top 20/2016

Country	Score
South Sudan	8.384
Yemen, Rep.	7.750
Chad	7.733
Somalia	7.682
Sudan	7.645
Central African Republic	7.379
Iraq	7.330
Burundi	7.218
Ukraine	7.174
Afghanistan	7.165
Congo, Dem. Rep.	7.059
Pakistan	7.046
Syria	6.960
Ethiopia	6.863
Libya	6.839
Nigeria	6.826
Cameroon	6.797
Kenya	6.790
Niger	6.768
Myanmar (Burma)	6.761

Legitimacy

For legitimacy, the Yemen Republic has the worst score at 7.99, with the Central African Republic, Syria, Eritrea and Democratic Republic of Congo rounding out the top five. In this cluster, a worrying trend is the continual deterioration of legitimacy in Mali.

The country previously had a score of 4.50 in 2011, which would classify it as having a solid level of legitimacy. However, since 2011, legitimacy has continued to rise, reaching a high of 7.10 in 2016, indicating a serious lack of legitimacy for the state.

Another notable trend in the top 20 rankings for legitimacy is the dominance of sub-Saharan African states. Though the ALC top 20 is typically occupied by Sub-Saharan African countries, the legitimacy top 20 has typically been more diverse, with strong representation of authoritarian regimes in the Middle East and North African region. With the exit of Bahrain, Myanmar and Uzbekistan, sub-Saharan states make up the entirety of the top 20 in 2016, with the exception of Syria and Turkmenistan.

Figure 2:
Legitimacy Scores - Top 20/2016

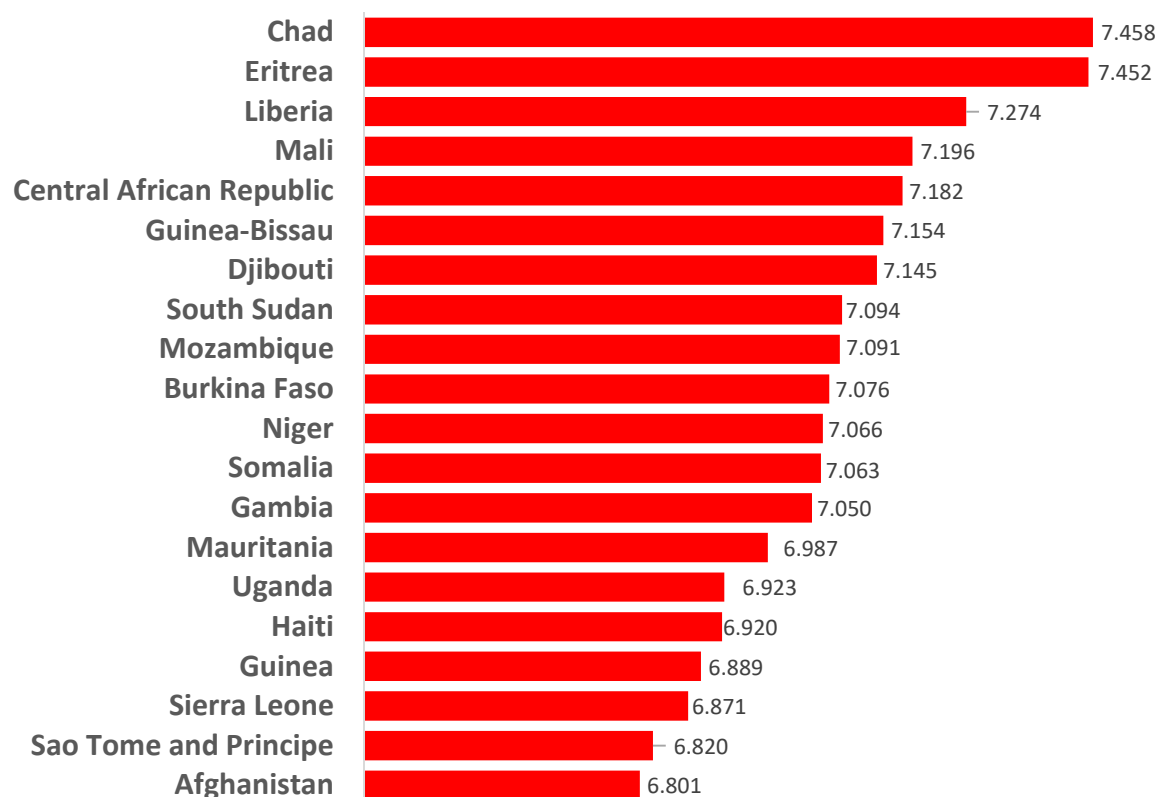| Country	Score
Yemen, Rep.	7.994
Central African Republic	7.975
Syria	7.884
Eritrea	7.864
Congo, Dem. Rep.	7.729
Chad	7.608
Somalia	7.602
Sudan	7.486
Haiti	7.401
South Sudan	7.357
Swaziland	7.283
Gambia	7.255
Djibouti	7.174
Ethiopia	7.109
Afghanistan	7.106
Mali	7.101
West Bank and Gaza	7.056
Guinea	7.007
Turkmenistan	7.007
Cote d'Ivoire	6.984

Capacity

In terms of capacity rankings, Chad tops the list with a score of 7.46, trailed closely by Eritrea, Liberia, Mali and the Central African Republic, who each have scored equal to or above 7.18.

One of the most notable changes in the capacity rankings from 2015 to 2016 is the exit of Burundi from the top 20 in 2016, despite being one of the most capacity-challenged states in previous years. In numerical terms, capacity in Burundi has decreased from a high of 7.06 in 2015 to a low of 6.56 in 2016, effectively exiting the top 20 rankings. It's possible that this sharp improvement in capacity score is due to international assistance efforts, such as those of the World Bank, UNICEF, VNG International and others.

Figure 3:
Capacity Scores - Top 20/2016

Country	Score
Chad	7.458
Eritrea	7.452
Liberia	7.274
Mali	7.196
Central African Republic	7.182
Guinea-Bissau	7.154
Djibouti	7.145
South Sudan	7.094
Mozambique	7.091
Burkina Faso	7.076
Niger	7.066
Somalia	7.063
Gambia	7.050
Mauritania	6.987
Uganda	6.923
Haiti	6.920
Guinea	6.889
Sierra Leone	6.871
Sao Tome and Principe	6.820
Afghanistan	6.801

Regional and Country-level Analysis

Figure 4 below shows a regional comparison based on authority, legitimacy, capacity, and global fragility. In keeping with results from previous years, it is apparent that overall, sub-Saharan Africa tends to register the higher score in all categories with the exception of authority. South Asia, which has typically been the most authority-challenged region, has shown signs of improvement in 2016 indicating that sub-Saharan Africa may overtake it in coming years. However, it is worth noting that this improvement in authority has been more or less offset by a score increase in legitimacy, leaving global fragility unchanged.

Another interesting trend can be seen in the average legitimacy score for the East Asia & Pacific region, which has decreased since 2014, indicating improvement. Conversely, it appears that the average legitimacy for the Middle East and North Africa region has increased in the same timeframe, placing it above the 6.0 threshold. This is in line with a longer-term trend, as state legitimacy in this region continues to erode. This is a worrying development which will continue to foster fragility in the region and hamper efforts aimed at reducing conflict.

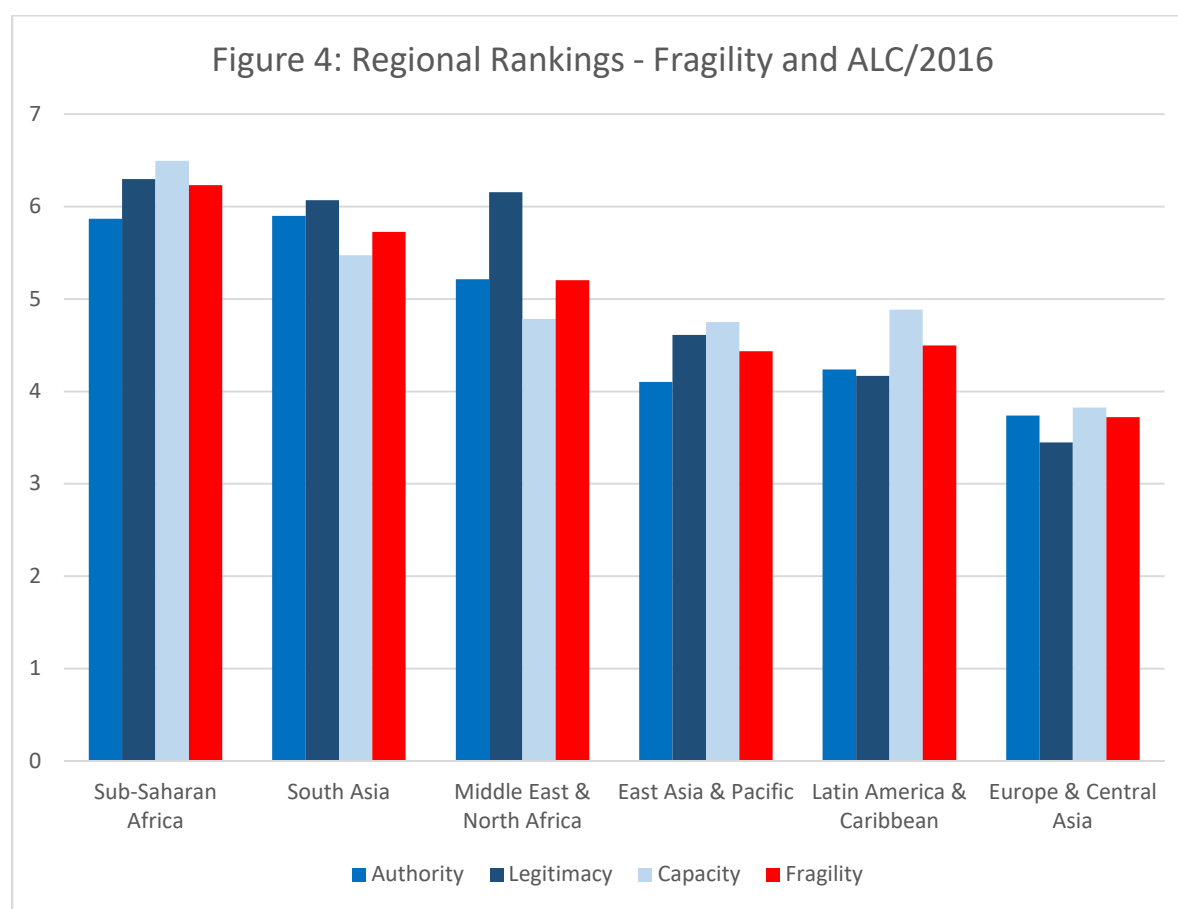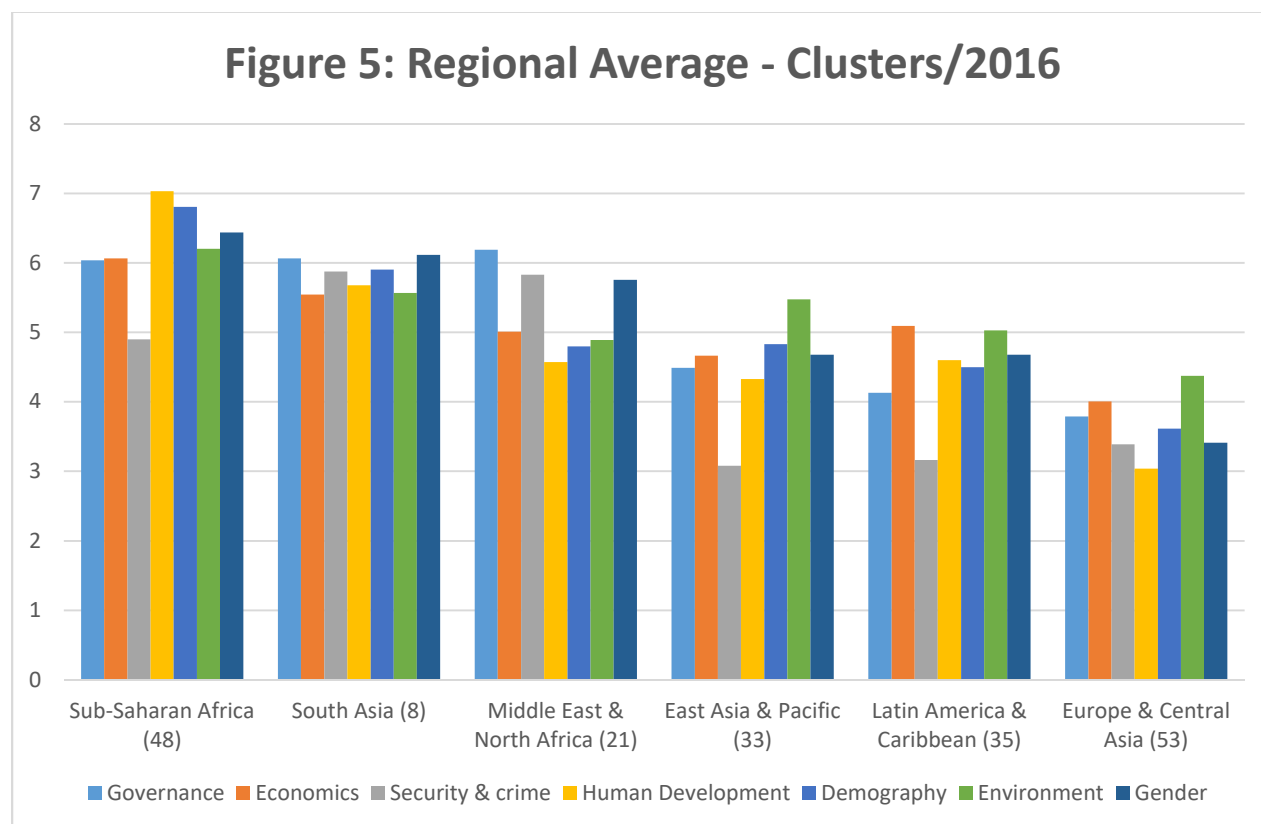Figure 4: Regional Rankings - Fragility and ALC/2016

Figure 5 below shows a regional comparison based on seven indicator clusters: governance, economics, security and crime, human development, demography, environment and gender.
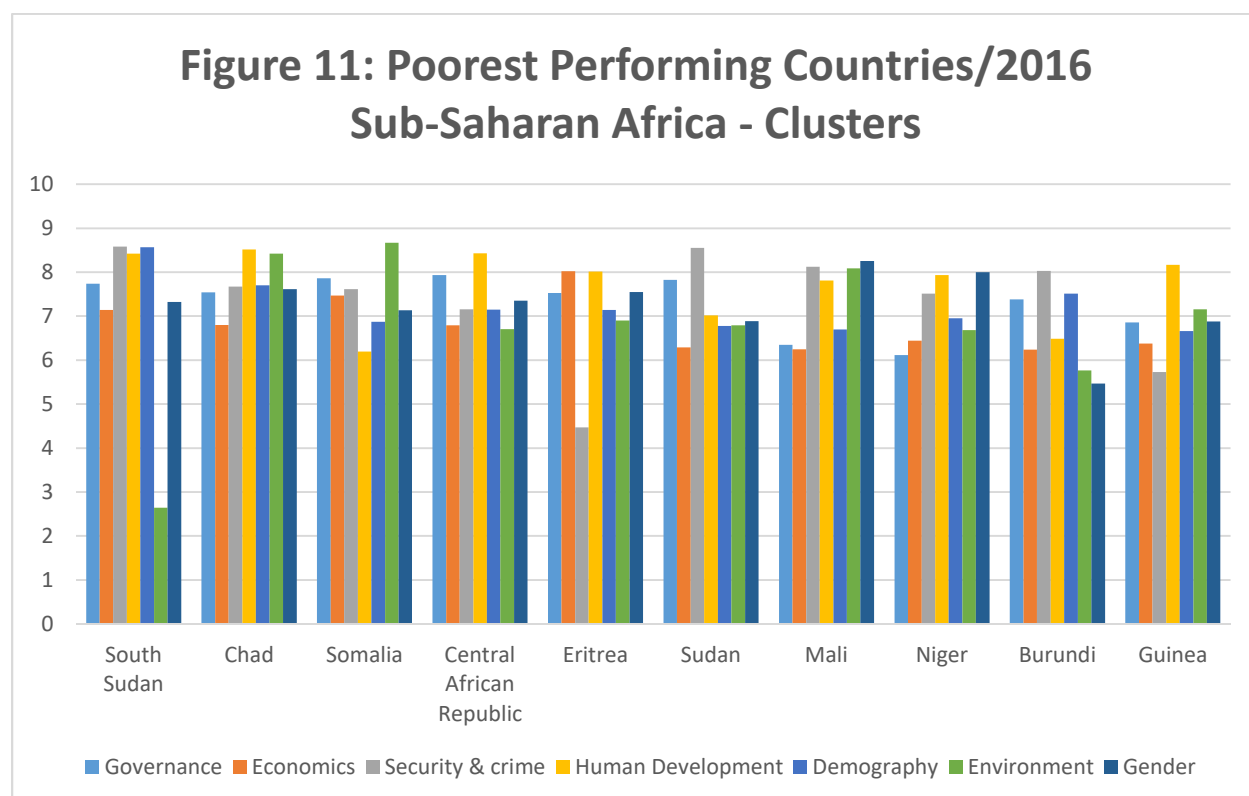
One interesting trend is the improvements made by South Asia in terms of environment scoring. In 2015, this region was the poorest performer in terms of the environment, scoring above 7.0 on average. However, in 2016 there have been substantial improvements which have lowered the regional average below the 6.0 threshold, placing them ahead of sub-Saharan Africa and the East Asia & Pacific regions.

On the other hand, environmental measures have deteriorated in the East Asia and Pacific region, driven largely by rising scores for the small island states in the region which are increasingly facings risks associated with global climate change; such as rising sea levels.

Another interesting point to note is the elevated economics score for the Latin America and Caribbean region, which is high comparatively speaking. In the other clusters, the region has scored quite well but demonstrates difficulty in the economic realm, a notion which is consistent with previous CIFP reports.
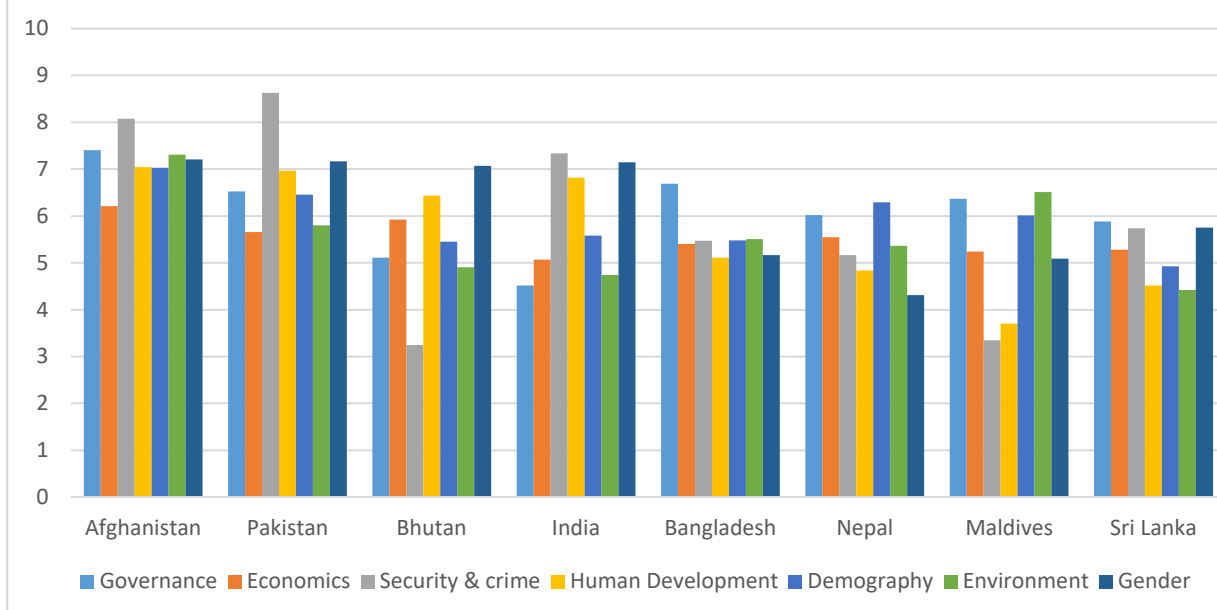

Figure 5: Regional Average - Clusters/2016

Figures 11 - 16 expands on this discussion above, providing an overview of the top 10 worst performing countries in each region.

Figure 11: Poorest Performing Countries/2016 Sub-Saharan Africa - Clusters

In Sub-Saharan Africa, the worst performing countries are the same who top the global list of most fragile states, including South Sudan, Chad and Somalia among others. Evidence of Sub-Saharan African fragility can be seen the elevated human development scores which are higher than in any of the other regions with four countries (South Sudan, Chad, Central African Republic and Guinea) scoring above 8.0.

Other driving factors of fragility in this region are governance and demography, with nearly all of the worst performing countries scoring above 7.0 in both clusters.
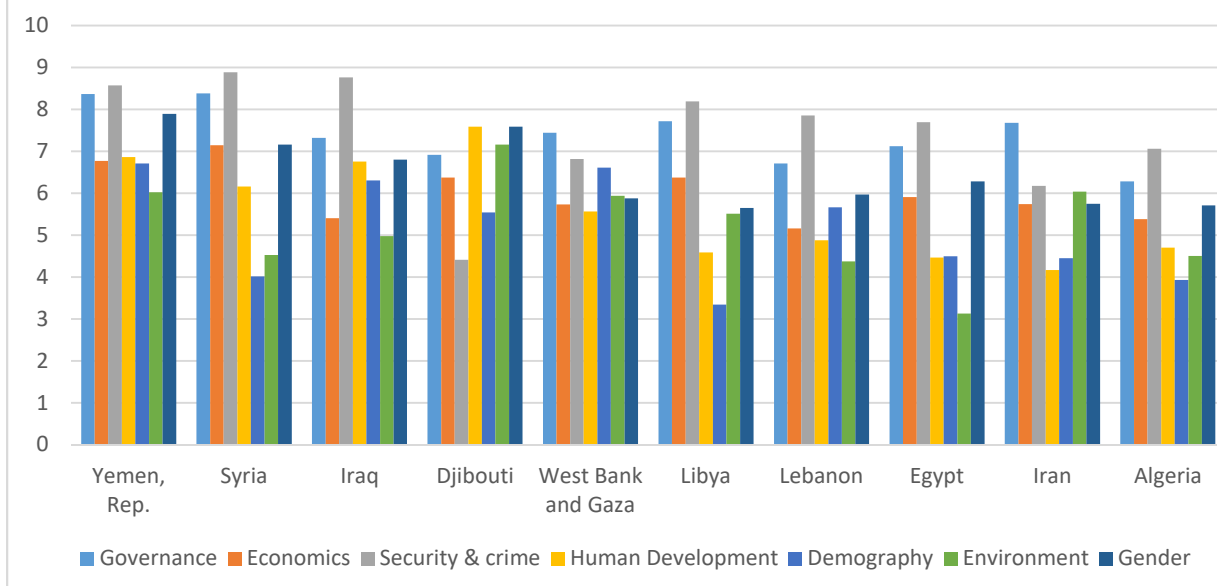
Figure 12: Poorest Performing Countries/2016 South Asia - Clusters

Afghanistan is the worst performing country in the South Asia region, with scores higher than its regional neighbors in every cluster except security and crime. This cluster is lead by Pakistan with exceptionally high score of 8.63, which makes it an outlier in comparison with other countries in the region.
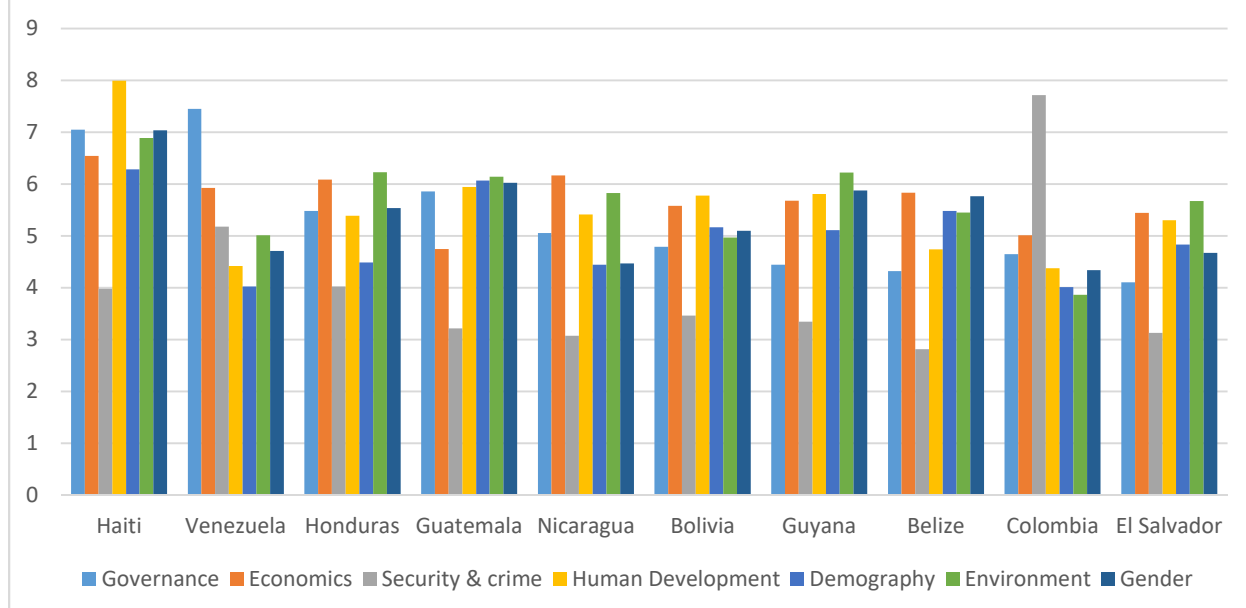
Another interesting point to note is the relatively strong performance of Bangladesh in comparison to Pakistan in all clusters except governance. This is due to improvements that Bangladesh has seen since 2015 in terms of capacity, human development and the economy.

**Figure 13: Poorest Performing Countries/2016
Middle East & North Africa - Clusters**

In 2016, the Yemen Republic was the worst performing country in the Middle East & North Africa region. In Yemen, as in the region more generally, fragility is driven primarily by ongoing difficulties in governance, security and crime and gender. In many instances, elevated scores in these clusters have not improved over time, and in many cases they continue to rise.

Figure 14: Poorest Performing Countries/2016 Latin America & The Caribbean- Clusters
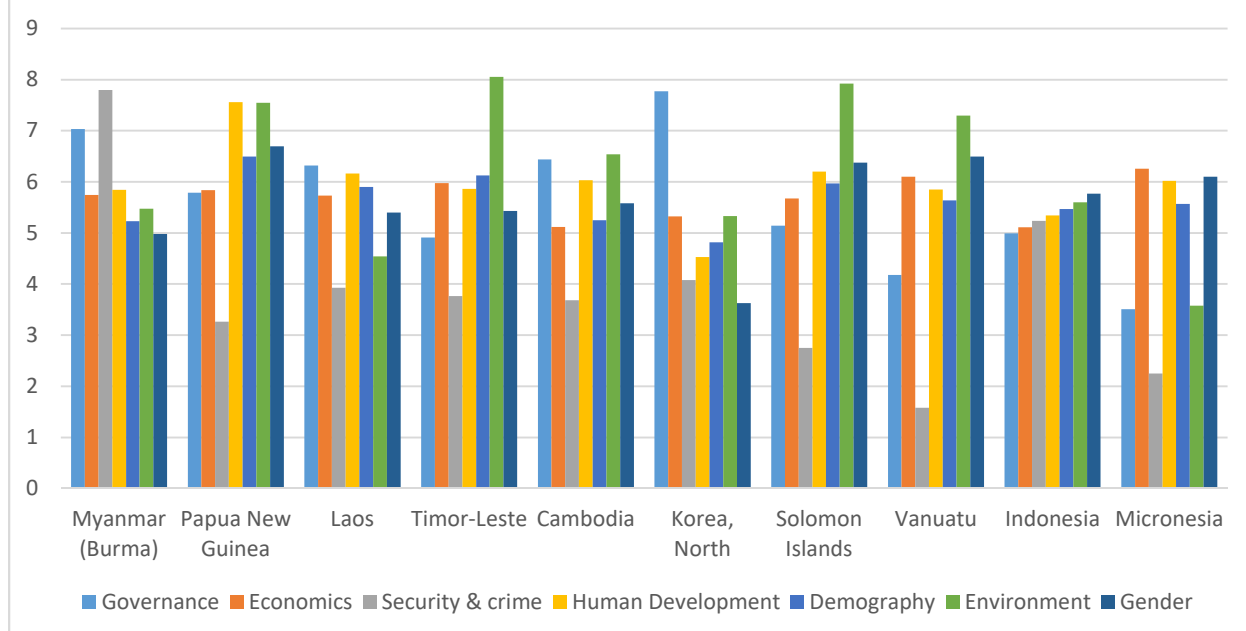
In the Latin America and Caribbean region, Haiti was the worst performing country, scoring above its regional neighbors in most clusters.

Though cluster scores are similar between countries in this region, it is important to note two significant outliers. One is Columbia, whose score for security and crime remains significantly above others in the region despite recent developments such as the negotiated peace settlement.
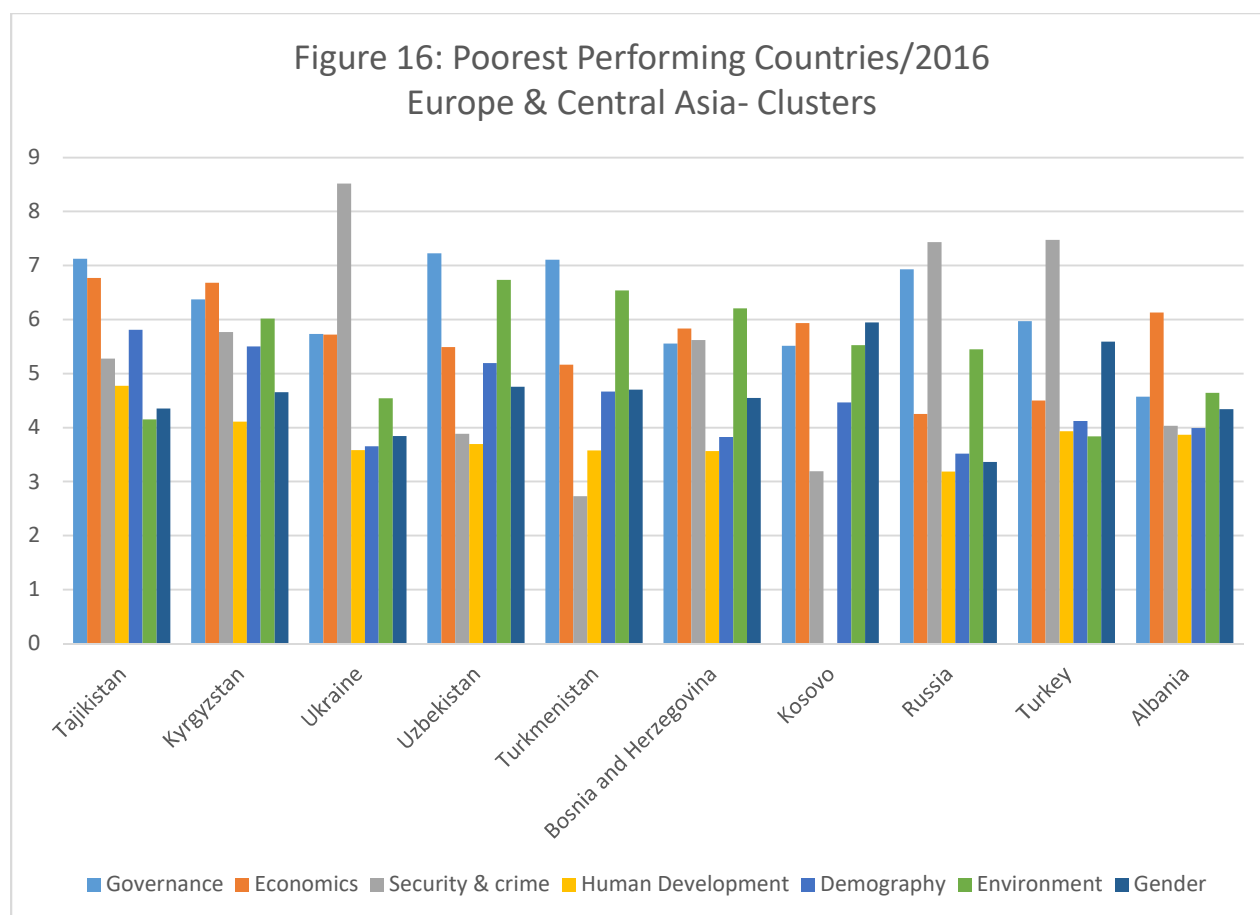
The other noteworthy outlier is Venezuela's governance score, which has increased significantly from 6.94 in 2015 to 7.45 in 2016, which is the highest governance score for this country in the past five years.

Figure 15: Poorest Performing Countries/2016
East Asia & Pacific - Clusters

Myanmar was the worst performing country in the East Asia and Pacific region, due in large part to significantly high scores in governance as well as security and crime. Though there have been improvements in governance since 2015, security and crime has risen sharply from a score of 6.21 in 2015 to a five year high of 7.80 in 2016.

For the region as a whole, fragility is driven primarily by the environmental factors and risks faced by many of the smaller island states. To a lesser extent, governance is another driver given the scores of Myanmar, Laos, Cambodia and North Korea.

Figure 16: Poorest Performing Countries/2016
Europe & Central Asia- Clusters

Tajikistan was the worst performing country in Europe and Central Asia, with high scores in both governance and economics. Both of these clusters appear to drive general fragility in the region, followed by environmental factors.

An important outlier to note is Ukraine, with an elevated score of 8.52 in security and crime. Russia and Turkey also have high scores in this cluster, each well above 7.0 and nearly equal to one another (7.47 in Turkey and 7.43 in Russia). In each of these countries, security and crime has increased since 2015.

3.   Categorization of Countries

In this section, we focus on state categorization of states for the purposes of tracking tendencies towards backsliding and democratic reversal. Ian Bremmer[7] introduced a novel concept of country status that depicted a country's stability against its level of openness that has since been used to describe the considerable challenge that countries face when attempting to democratize. This depiction took on the form of a slanted J-curve whereby countries at the bottom were considered unstable, those on the upper left as moderately stable but closed, and those on the right as increasingly open and stable the further the country resided up that side. While notionally a simplistic generalization, this concept nevertheless illustrates an important barrier to countries seeking greater stability. First, countries that reside on the shorter left side of the J-curve cannot attain the potentially higher levels of stability as those countries on the right side. Second, if countries on the left side aspire to democratize (i.e., to essentially reside on the right side), they face the rather unwelcome dilemma of transitioning along the unstable arc at the bottom of the J-curve. While this of course is not a path that a country would prefer to choose, historically it is an inevitable consequence in the vast majority of cases.[7]

Some countries have successfully transitioned from the left to the right side of the J-curve, albeit with certain challenges and setbacks along the way (e.g., post-Soviet Eastern Bloc states). On the other hand, most countries that enter the trough of the J-curve often reside there for a considerable period of time, usually with some oscillation (e.g., post-colonial states in a fragility trap). In other cases, the instability confronting a country that begins to open up creates susceptibility for a reversal to its previous closed condition (e.g., post-Soviet Russia; post-Arab Spring states). In essence, if a country begins to open up, then considerable effort, perhaps beyond that country's capability, is required to sustain the momentum to open up further if it is to successfully transition through the trough of instability.

While Bremmer's J-curve provides an intuitively appealing qualitative depiction of state status, it lacks a quantifiable means to gauge this status. Recently, Carment et al.[8] proposed a formulation to resolve this deficiency. Borrowing on the three dimensions of statehood (A, L, and C where low values pertain to high performance), stability is proposed as $S = 9 - (A + C)/2$ under the assumption that improvements in

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[7] Ian Bremmer (2006). The J Curve: A New Way to Understand Why Nations Rise and Fall. New York: Simon & Schuster, Inc.

[8] David Carment, Peter Tikuisis, Rachael Calleja, and Mark Haichin (2017). The J Curve Revisited: Assessing Backsliding and Reversal Among Unstable States. WIDER Working Paper Series .
https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2017-170.pdf

authority (comprising command and security) and capacity (comprising resources and means) are stabilizing. Openness is simply proposed as $O = 9 - L$ under the assumption that a state's legitimacy (comprising regime acceptance and freedoms) can serve as a proxy of its openness.

Figure 17 shows the values of S plotted against O for 168 countries for which complete values of A, L, and C are known for 2016. The resultant slanted J-curve resembles the shape found in Carment et al.[8] using a different data set.

Figure 17. Plot of Stability vs Openness for 168 countries. The red markers represent the average values of various country clusters, as defined further in the text and Figure 2.

Next, we adapt the concept of clustering countries according to shared characteristics, as developed by Tikuisis et al.[9] Specifically, countries that are deemed moderately stable but closed are considered brittle (B). Those that function reasonably well but are economically weak are considered impoverished (I).

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[9] Peter Tikuisis and David Carment (2017). Categorization of States Beyond Strong and Weak. Stability: International Journal of Security & Development 6(1): 12, pp. 1–23, DOI: https://doi.org/10.5334/sta.483 .

Countries weak in all three dimensions of statehood are considered fragile (F), and those that are open with good performance in A, L, and C are considered moderately to highly functional.

Given that we are using a different data set than the one used to develop this typology,[8] we apply different criteria to segregate countries, as outlined in Table 3 and illustrated in Figure 18, which replicates Figure 17 but with the identities of clusters and certain selected countries. Tables 4 through 8 list the countries within these clusters. It's important to consider countries at the edges of the O and S criteria with some flexibility (i.e., perhaps sharing characteristics of a neighbouring cluster, as for example the countries encircled near the intersection of the M, I, B, and F clusters in Figure 18).

Figure 18. Plot of Stability vs Openness for 168 countries arranged in clusters. F refers to fragile states, B to brittle states, I to impoverished states, M to moderately functional states, and H to highly functional states. The numbers in parenthesis refer to the countries' fragility index (FI) rankings.

It is also noteworthy that the spread of O and S values within a cluster varies considerably. For example, countries such as Botswana and Costa Rica within the moderately functional cluster vary considerably in

openness, while brittle countries such as Myanmar and UAE vary considerably in stability, as seen in Figure 18. These spreads are also reflected by the differences in the countries' FI rankings.

Table 3. Selection criteria for state categorization.

Cluster	Openness Criterion	Stability Criterion
Fragile (F)	O < 3.5	S < 3.5
Brittle (B)	O < 3.5	S > 3.5
Impoverished (I)	O > 3.5	S < 3.5
Moderately Functional (M)	O > 3.5	3.5 < S < 5.0
Highly Functional (H)	O > 3.5	S > 5.0

Table 4. Fragile states (n = 31).

State	A	L	C	O	S
Afghanistan	6.73	5.92	6.56	3.08	2.36
Angola	7.30	6.24	5.03	2.76	2.84
Burundi	7.01	6.60	6.73	2.40	2.13
Cameroon	6.72	5.68	5.75	3.32	2.76
Central African Republic	7.09	7.87	6.05	1.13	2.43
Chad	8.16	7.12	6.46	1.88	1.69
Comoros	6.14	5.98	7.79	3.02	2.03
Congo, Dem. Rep.	7.16	7.24	5.37	1.76	2.73
Congo, Rep.	7.81	7.00	5.48	2.00	2.36
Cote d'Ivoire	6.00	5.50	6.26	3.50	2.87
Egypt	5.27	5.92	5.85	3.08	3.44
Equatorial Guinea	6.36	7.44	5.61	1.56	3.02
Ethiopia	6.21	6.28	5.86	2.72	2.97
Gabon	5.56	6.70	5.80	2.30	3.32
Gambia	6.58	7.53	7.52	1.47	1.95
Guinea	6.46	5.83	5.94	3.17	2.80
Guinea-Bissau	6.88	6.38	6.46	2.62	2.33
Haiti	6.80	6.47	6.74	2.53	2.23
Iraq	6.09	6.28	5.52	2.72	3.20
Kyrgyzstan	5.93	5.86	6.48	3.14	2.80
Liberia	5.91	6.12	6.09	2.88	3.00
Mali	6.30	5.56	6.77	3.44	2.47
Mauritania	7.03	5.59	6.25	3.41	2.36
Rwanda	5.27	5.80	5.95	3.20	3.39
Sudan	6.83	6.63	6.13	2.37	2.52
Swaziland	5.78	7.61	6.33	1.39	2.94
Tajikistan	6.35	6.95	6.62	2.05	2.52
Uzbekistan	5.39	7.71	6.03	1.29	3.29
West Bank and Gaza	4.16	8.15	7.47	0.85	3.19
Zambia	5.94	5.69	5.54	3.31	3.26
Zimbabwe	5.93	5.85	5.76	3.15	3.16

Table 5. Brittle states (n = 24).

State	A	L	C	O	S
Armenia	4.23	6.36	5.30	2.64	4.23
Azerbaijan	5.70	6.87	4.29	2.13	4.00
Belarus	5.88	6.30	3.17	2.70	4.47
Bhutan	5.10	6.33	5.14	2.67	3.88
Brunei Darussalam	5.00	7.42	5.01	1.58	3.99
Cambodia	5.44	6.44	4.84	2.56	3.86
China	4.79	6.03	3.94	2.97	4.63
Jordan	4.24	5.71	6.21	3.29	3.77
Kazakhstan	5.16	6.17	3.61	2.83	4.62
Laos	5.73	6.97	4.43	2.03	3.92
Lebanon	5.34	6.44	5.51	2.56	3.57
Malaysia	4.71	5.68	3.48	3.32	4.90
Maldives	5.31	7.05	5.13	1.95	3.78
Myanmar (Burma)	5.80	7.09	4.90	1.91	3.65
Oman	4.50	7.35	4.86	1.65	4.32
Qatar	4.47	6.91	3.97	2.09	4.78
Russia	6.16	6.36	2.96	2.64	4.44
Saudi Arabia	5.09	6.83	3.79	2.17	4.56
Singapore	3.87	5.65	3.04	3.35	5.54
Thailand	4.21	6.60	3.37	2.40	5.21
Turkey	4.80	5.59	4.64	3.41	4.28
Turkmenistan	5.06	7.40	4.57	1.60	4.18
United Arab Emirates	3.63	6.32	3.29	2.68	5.54
Vietnam	5.43	6.50	4.59	2.50	3.99

Table 6. Impoverished states (n = 29).

State	A	L	C	O	S
Bangladesh	5.41	5.05	6.17	3.95	3.21
Belize	5.25	4.42	5.79	4.58	3.48
Benin	5.97	4.29	5.67	4.71	3.18
Burkina Faso	5.90	5.06	6.10	3.94	3.00
Cape Verde	4.42	3.22	6.77	5.78	3.40
Ecuador	5.58	4.12	5.50	4.88	3.46
Fiji	5.64	5.32	6.11	3.68	3.13
Ghana	5.77	3.62	5.50	5.38	3.36
Guatemala	5.07	5.27	6.25	3.73	3.34
Guyana	5.54	4.18	5.82	4.82	3.32
Honduras	5.12	5.29	6.01	3.71	3.43
Kenya	6.49	5.21	6.21	3.79	2.65

State	A	L	C	O	S
Lesotho	5.75	4.98	6.57	4.02	2.84
Madagascar	6.06	5.22	5.85	3.78	3.05
Malawi	6.40	5.06	6.01	3.94	2.80
Mozambique	6.38	4.47	5.90	4.53	2.86
Nepal	6.83	4.40	5.50	4.60	2.84
Nicaragua	5.29	5.03	5.84	3.97	3.43
Niger	6.48	5.44	6.37	3.56	2.57
Nigeria	6.76	5.28	5.77	3.72	2.74
Pakistan	6.48	5.26	6.34	3.74	2.59
Sao Tome and Principe	6.02	4.44	7.55	4.56	2.22
Senegal	5.33	2.96	6.78	6.04	2.94
Sierra Leone	6.05	5.40	5.72	3.60	3.11
Solomon Islands	5.29	5.40	6.51	3.60	3.10
Sri Lanka	5.79	5.47	5.83	3.53	3.19
Tanzania	5.57	4.29	5.64	4.71	3.40
Togo	5.55	5.27	6.18	3.73	3.13
Uganda	6.48	5.42	6.11	3.58	2.71

Table 7. Moderately Functional states (n = 49).

State	A	L	C	O	S
Albania	5.00	4.74	5.62	4.26	3.69
Algeria	5.63	5.21	5.28	3.79	3.55
Antigua and Barbuda	4.42	4.88	5.52	4.12	4.03
Argentina	4.55	2.98	3.97	6.02	4.74
Bahamas	3.61	3.64	4.53	5.36	4.93
Barbados	4.03	3.37	4.42	5.63	4.78
Bolivia	5.71	3.81	4.95	5.19	3.67
Bosnia and Herzegovina	5.72	5.38	5.14	3.62	3.57
Botswana	4.77	5.35	4.62	3.65	4.31
Brazil	5.47	3.96	3.92	5.04	4.30
Chile	4.29	2.73	4.15	6.27	4.78
Colombia	5.17	4.45	4.65	4.55	4.09
Costa Rica	3.29	2.21	5.30	6.79	4.71
Cyprus	3.95	2.75	4.36	6.25	4.85
Dominican Republic	4.19	4.10	6.16	4.90	3.82
El Salvador	4.69	3.60	6.00	5.40	3.65
Georgia	4.32	5.04	4.84	3.96	4.42
Greece	4.04	3.56	4.17	5.44	4.89
Grenada	4.73	3.37	5.49	5.63	3.89
India	5.52	4.14	5.29	4.86	3.59
Indonesia	4.94	4.33	5.09	4.67	3.98
Israel	4.28	3.55	4.12	5.45	4.80
Jamaica	4.89	4.08	5.90	4.92	3.60
Kiribati	4.87	4.37	5.85	4.63	3.64
Macedonia	4.11	4.95	5.04	4.05	4.43

Mauritius	3.64	3.74	5.52	5.26	4.42
Mexico	4.53	3.71	4.24	5.29	4.61
Moldova	4.41	4.72	4.62	4.28	4.48
Mongolia	5.33	3.66	4.71	5.34	3.98
Montenegro	4.87	4.84	5.11	4.16	4.01
Morocco	4.52	5.26	5.47	3.74	4.00
Namibia	5.24	3.33	4.85	5.67	3.95
Panama	4.21	4.15	4.80	4.85	4.49
Paraguay	4.69	4.89	4.70	4.11	4.31
Peru	4.66	3.53	4.42	5.47	4.46
Philippines	4.99	3.85	5.93	5.15	3.54
Saint Lucia	4.06	3.32	5.60	5.68	4.17
Saint Vincent & Grenadines	4.39	3.72	6.19	5.28	3.71
Samoa	4.24	4.97	6.45	4.03	3.66
Serbia	4.64	3.59	4.71	5.41	4.33
Seychelles	3.89	5.03	5.36	3.97	4.38
South Africa	5.04	2.79	4.68	6.21	4.14
Suriname	5.84	4.13	5.02	4.87	3.57
Tonga	4.30	5.34	6.65	3.66	3.52
Trinidad and Tobago	5.43	3.30	4.36	5.70	4.10
Tunisia	4.88	3.32	5.32	5.68	3.90
Ukraine	6.59	4.94	3.89	4.06	3.76
Uruguay	4.59	2.95	4.08	6.05	4.66
Vanuatu	4.43	5.12	6.08	3.88	3.75

Table 8. Highly Functional states (n = 35).

State	A	L	C	O	S
Australia	3.59	1.84	3.38	7.16	5.51
Austria	3.33	1.76	3.43	7.24	5.62
Belgium	3.68	1.24	3.70	7.76	5.31
Bulgaria	4.15	3.67	3.59	5.33	5.13
Canada	3.92	1.72	2.93	7.28	5.58
Croatia	3.35	3.50	3.92	5.50	5.36
Czech Republic	3.71	2.36	3.16	6.64	5.57
Denmark	2.74	1.26	3.13	7.74	6.06
Estonia	3.83	2.13	3.58	6.87	5.29
Finland	2.81	1.16	3.13	7.84	6.03
France	3.70	2.25	3.48	6.75	5.41
Germany	3.43	1.41	3.10	7.59	5.73
Hungary	4.06	4.27	3.49	4.73	5.22
Iceland	2.69	1.69	3.20	7.31	6.05
Ireland	2.48	2.01	3.82	6.99	5.85
Italy	4.03	1.86	3.79	7.14	5.09
Japan	2.86	2.83	3.18	6.17	5.98
Korea, South	3.80	3.46	3.42	5.54	5.39

Latvia	3.77	3.28	3.56	5.72	5.34
Lithuania	3.49	2.69	3.36	6.31	5.58
Luxembourg	2.84	1.86	4.24	7.14	5.46
Malta	2.81	3.21	4.50	5.79	5.35
Netherlands	3.34	1.27	3.58	7.73	5.54
New Zealand	3.02	1.80	3.42	7.20	5.78
Norway	3.44	1.23	2.70	7.77	5.93
Poland	3.20	2.64	3.19	6.36	5.81
Portugal	3.72	1.52	3.28	7.48	5.50
Romania	3.38	3.81	3.79	5.19	5.42
Slovakia	3.57	2.61	3.89	6.39	5.27
Slovenia	3.40	1.87	3.83	7.13	5.38
Spain	2.74	1.66	3.47	7.34	5.90
Sweden	2.69	1.08	3.00	7.92	6.16
Switzerland	3.22	1.48	2.87	7.52	5.96
United Kingdom	3.33	1.77	3.44	7.23	5.61
United States	3.86	2.12	2.47	6.88	5.84

Figure 19 places the clustered countries on a world map. Strikingly, but not surprising, countries of certain clusters tend to be in close geographic proximity. For example, the vast majority of fragile countries are located in or near equatorial Africa while brittle countries are largely found in Asia. Western Europe is essentially comprised of highly functional countries whereas South America is essentially comprised of moderately functional countries. And finally, impoverished countries are seen to be mostly dispersed globally within or close to the equatorial zone.
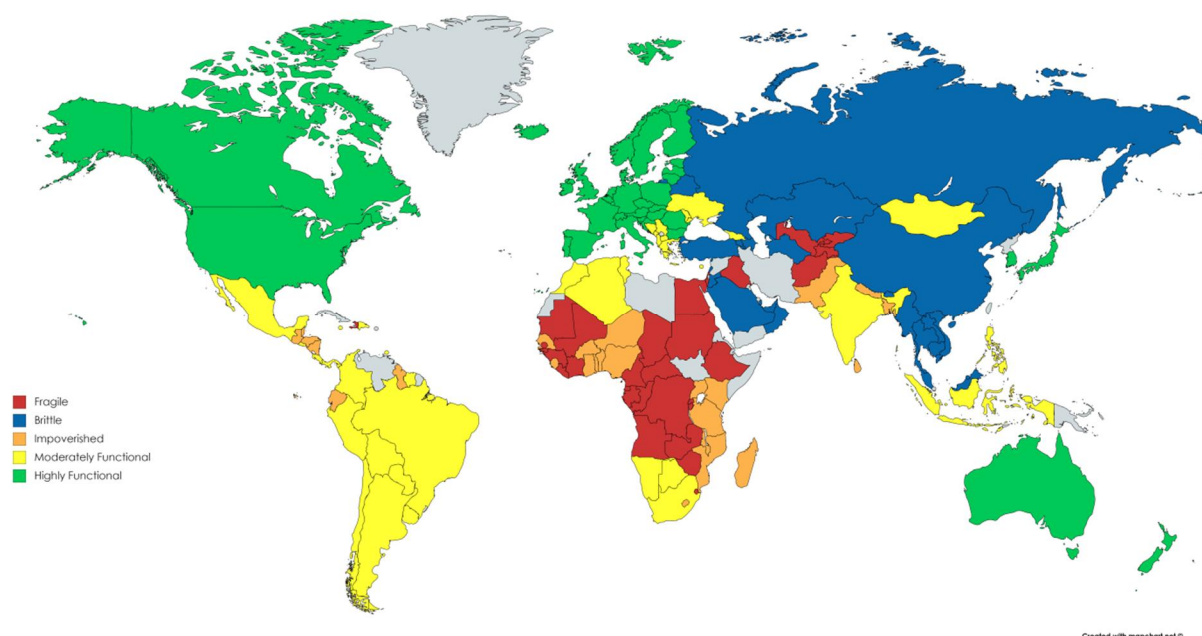
Figure 19. World map[10] showing countries clustered by colour. Note that not all the countries analyzed are shown due to the large scale of the map while those countries in grey were not analyzed due to insufficient data.

4. Conclusions

This report has used a clustering approach drawing on the Country Indicators for Foreign Policy (CIFP) project that characterizes states along three dimensions of stateness (specifically authority (A), legitimacy (L), and capacity (C)). Our focus on ALC and cluster performance across various regions provides additional evidence of the diversity of experiences with respect to state fragility and the need to continue to consider the various dimensions of fragility rather than a single ranked index.   One does not lose policy-relevant information when state fragility is conceptualized as a multi-dimensional phenomenon compared to an analysis where a single composite index is used.

Our categorization of states and subsequent development of a J-curve based on a country's stability against its openness (using all ALC dimensions) illustrates a significant challenge for countries striving towards greater stability. Countries on the shorter left side of the J-curve cannot achieve the higher levels of stability as those countries on the right side without improving their openness. Yet, for many such countries, they would then face the rather unwelcome dilemma of transitioning along the unstable arc at

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the bottom of the J-curve. Several countries already at the bottom arc of the J-curve tend to persist there, as in a fragility trap.

In addition to the need for a differentiated approach, further investments should focus on fragility persistence, as described above, to determine why some countries stuck in a fragility trap remain so and why despite considerable donor investments some countries remain mired at the bottom. Chief among these is South Sudan, which has ranked as the most fragile state for the last three years and has been among our top five since gaining independence. Also of concern are the very high authority scores and deterioration in legitimacy for sub-Sahara Africa and Middle East states signalling a ratcheting up of extremely violent and protracted conflicts.

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About CIFP

Country Indicators for Foreign Policy is an independent research organisation based at the Norman Paterson School of International Affairs at Carleton University, in Ottawa, Canada, focusing on fragile state, democracy and governance, aid monitoring, conflict risk analysis, early warning and mainstreaming aid effectiveness. The CIFP methodology has been in place since 2005 and is now widely accepted and used by the policy and research communities. Details regarding the origins of the methodology and the theory behind it can be found in the CIFP concept note published online at www.carleton.ca/cifp and in the book: Security, Development and the Fragile State: Bridging the Gap Between Theory and Policy. CIFP's dimensions of stateness have been adopted by the OECD Development Assistance Committee (DAC) as embodied in their three pillars of stateness. These are the capacity of state structures to perform core functions; their legitimacy and accountability; and their ability to provide an enabling environment for strong economic performance to generate incomes, employment and domestic revenues.   The project has over 18 years' experience in developing methodologies, training and working with local, national and regional organizations and governments. Funders, supporters and users include the United Nations Development Program (UNDP), Canada's Department of Foreign Affairs and International Trade (DFAIT), Department of National Defence (DND), Defence Research and Development Canada (DRDC), the Canadian International Development Agency (CIDA), the Conflict Prevention Network, the European Commission's Joint Research Centre, the World Food Program, Criminal intelligence Services of Canada, Canada Border Services Agency (CBSA), The International Development Research Centre (IDRC), the OECD's International Network on Conflict and Fragility (INCAF), the Social Sciences and Humanities Research Council (SSHRC), and private sector firms, including extractive industries.
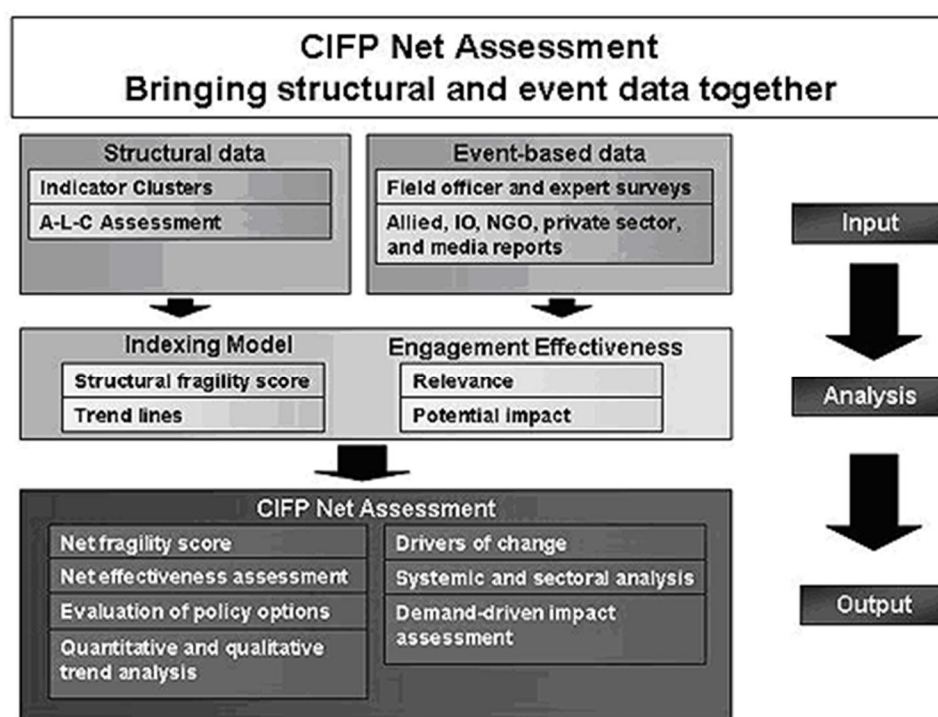
About the Authors

David Carment is a full Professor of International Affairs at the Norman Paterson School of International Affairs and has over 20 years' experience in policy relevant research on fragile states, conflict prevention, mainstreaming risk analysis and aid allocation. He led a CIDA funded initiative on mainstreaming research on failed and fragile states into policy making over the 2005-2008 period. He also served DAC-OECD's working group on fragile states. He has developed risk analysis training workshops for NGOs in Africa, Asia and Europe. He is the editor of *Canadian Foreign Policy Journal*.

Peter Tikuisis (PhD) is a retired Defence Scientist from Defence Research and Development Canada and currently holds an Emeritus position there as well as a Research Associate position at the Norman Paterson School of International Affairs. Much of his work involves the application of mathematical modelling to various phenomena. He has published widely in bubble physics, decompression sickness, cold exposure physiology, soldier performance, and country instability.

Yiagadeesen (Teddy) Samy (PhD) is a full Professor of International Affairs and the Director at the Norman Paterson School of International Affairs. An economist by training, he is the author and co-author of several peer-reviewed articles and book chapters on trade and labor standards, state fragility, small island developing states, foreign aid and income inequality. He has co-authored a book (with David Carment and Stewart Prest) on fragile states, and published by Routledge in 2009, and was the co-editor of the 2013 volume of Canada Among Nations on Canada-Africa relations. His textbook on *African Economic Development* (with Archibald Ritter and Steven Langdon) will be published by Routledge in 2018.

James Floch is an M.A. candidate in International Affairs at Carleton University specializing in International Organizations and Global Public Policy. He holds a bachelor's degree in social sciences from the University of Ottawa, with a specialization in sociology and a minor in Public Administration. His research interests include international organizations and international political economy as well as conflict studies and country risk analysis.

Appendix 1

As part of a broader effort to enable more effective international engagement in failed and fragile states, a team from Carleton's Country Indicators for Foreign Policy project (CIFP - www.carleton.ca/cifp) has been working with the Canadian government in a multi-year initiative that has three objectives. First, we have developed a number of wide-ranging tools that encompass, among other things, the monitoring, forecasting, and evaluation of failed and fragile states, as well as the assessment of supporting policies intended to address the development, security, and economic challenges they represent. The following diagram outlines the full extent of the CIFP analytical framework - known as the CIFP Net Assessment (CNA) - identifying the various modules involved in the analysis.

Second, the project presents a methodology for evaluating individual country performance. This drill-down capability provides guidance to programming officers at CIDA and other government departments working in complex and fragile environments. It enables them to focus efforts and resources on the root structural causes of fragility rather than the outward symptoms of the problem, while simultaneously identifying areas of comparative strength within the state that may provide valuable points of entry for international development efforts. At the same time, it allows them to avoid decisions likely to further destabilize the country through otherwise unforeseen consequences of programming activities.

Third, the project engages in statistical and theoretical research, regarding the nature of the relationship between state fragility and selected key variables. The findings provide some insight into the varied causes of state fragility. Several important avenues requiring further study have been extensively covered in publication form. Such research is particularly relevant, given that the now broadly acknowledged lack of progress toward global attainment of the Millennium Development Goals (MDGs) is to a certain extent explained through the poor performance of the world's fragile and failed states (Samy and Carment, 2011). Furthermore, progress on the newly-adopted Sustainable Development Goals (SDGs) will require significant resources and focus on fragile and conflict-affected states (FCAS).
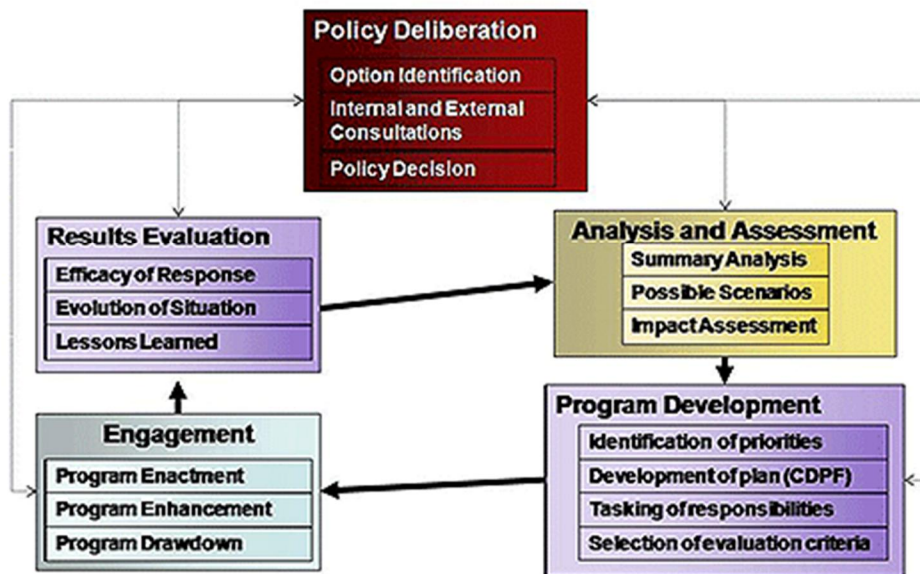
Innovations in Research Design and Methodologies for Risk Analysis, Country Monitoring and Impact Assessment

Effective policy in fragile states requires a solid analytic base that:

- Is sufficiently nuanced to allow the observer to understand differentiated performance in different areas of fragility, rather than presenting processes and performance in an oversimplified manner;
- Identifies both positive and negative sectors in each state's performance, thereby highlighting potential points of entry for external actors;
- Combines real time dynamic event and actor analysis with long-term structural information to counter time lags between developments on the ground and their reflection in statistical indicators and resulting programming priorities and timelines;
- Provides policy relevant diagnosis by matching the analysis to the end user's operational capacity; and
- Provides an evaluative framework with which to assess policy impact both before and after programs are implemented.

The relationship between these objectives and the policy cycle are shown here:
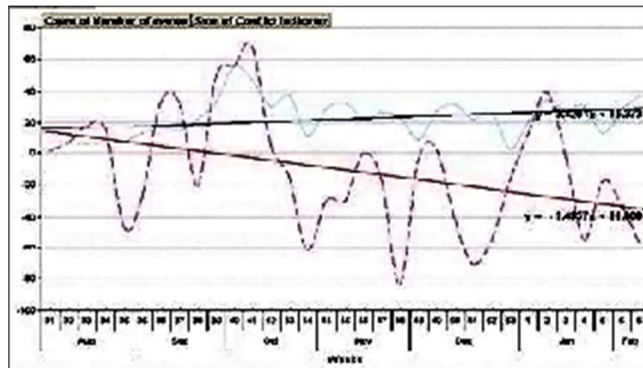
Development Policy Cycle

In order to address these policy objectives, the CIFP Fragile States Project has developed a three tiered multi-source, multi method policy relevant tool kit. Our argument has been that if they are to have any significant impact, fragile state policies require a multifaceted but focused analysis based on an appreciation of the relative risks that exist within and between states and, more importantly, the development of effective policy-relevant tools for international engagement. One of the key innovations has been the construction of a web-based country monitoring tool, shown here:

First, structural data, such as GDP per capita, political indices and human rights measures, provide a sturdy platform on which to build country analysis. Structural data are compiled by recognized organizations, sometimes in partnership with host nations. Structural data allows the end user to rank countries for quick assessments of performance within sub-sectors. Country level structural data also enable comparative analysis. For example, one may compare the voting rates among women in Ghana and Cote D'Ivoire using data collected by the UNDP or the World Bank. Using the same indicators and econometric analysis it is possible to determine in what way women's voting rates in Ghana and Cote D'Ivoire are influenced by education levels, rural and urban environments, and formal employment.

Second, the systematic collection and evaluation of dynamic data also known as events-based information analysis, is highly relevant to fragile states programming and processes. Dynamic data analysis whether it draws on information from media sources or country experts, is useful for identifying up-to-date trends in popular perceptions, preferences and stakeholder behaviors. Dynamic data analysis can add considerable value through regularized and standardized reporting. It can deepen understanding of trends found in structural data, and can highlight trend reversals. For example, a statistical study may show a steady decline in violent events over a series of years, but current events may evidence a sudden surge in violent demonstrations, one that will show up in structural data only until after the fact. Events-based information can also provide a window into stakeholder perceptions, how they are reacting to real-time changes and why they are doing so.

The figure below shows patterns of decline in governance performance approximately a year prior to the declared state of emergency in Pakistan in 2007. The red regression line in the graph represents the overall trend in events. Clearly, in the case of Pakistan, there was considerable evidence of an approaching crisis. Such evidence, if properly understood, can allow policymakers to respond in a timely fashion to impending problems, rather than simply responding after the fact.

Third, the project employs qualitative information, as a valuable complement to the systematic collection of statistical data, as it uncovers details and nuance. Put simply, when correctly structured, expert opinion can provide the "why" behind the "what" revealed through structural and dynamic data analysis. Expert opinions can provide detailed insight into specific issue areas, as well as offer ideas about what areas deserve the most attention going forward, either because they are functioning well and can be used to propagate positive reform in other parts of the governance system, or because they are weakening and threaten to undermine stability and development in other sectors. For example, CIFP's expert survey on Ghana highlighted the problem of low popular expectations of government as an obstacle to improving governance performance. Ghanaians had become so accustomed to limited government capacity that they had ceased to seriously challenge the government on its service delivery.