

Fragility Index for a Differentiated Approach

August 2014

Fragility is a complex and dynamic issue that is very difficult to be captured in one quantitative measure. However, an indicator that can gauge the level, degree, and trend of fragility at a country level is needed as a basis for allocating limited resources and as a guide for a differentiated approach toward engagement in countries with fragile and conflict-affected situations (FCAS). Therefore, the Asian Development Bank (ADB) is developing a fragility index based on its key dimensions. The index has been made comparable across countries and time to ensure that evaluation and monitoring of fragility trends can be conducted to see if the fragility situation has improved or worsened.

The index should serve as a guide to ADB and other similar institutions for engaging in FCAS countries¹ in line with the principle that there should be a differentiated approach toward these countries by considering the nature and degree of fragility reflected in the index. The operationalization of



the differentiated approach is expected to improve the overall effectiveness of policies, programs, and operations.

¹ “State” and “country” are used interchangeably in the fragility issue even though they may have different meanings.

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The full report on the fragility index will be published in *ADB Economics Working Paper Series* (forthcoming).

The initiative on developing the fragility index is part of the regional technical assistance project Enhancing ADB’s Engagement in Fragile and Conflict-Affected Situations (RETA 8065). ADB senior economist Guntur Sugiyarto developed the index under the guidance of Patrick Safran, ADB focal point for fragile and conflicted-affected situations. Statistician Artur Andrysiak and consultants Joseph Joven, Loresel Abainza, and Cyrel San Gabriel provided research and technical inputs.

Why Assess Fragility

The international community has increasingly recognized the challenges in dealing with FCAS countries and given the complexity and multidimensional nature of the situation, it has started to review and evaluate its policies to improve the effectiveness of its operations and to understand why aid has not delivered the intended results. In line with this, development partners and recipient countries recognize the need to consider a country's fragility situation. Therefore, understanding the nature, degree, source, and dynamics of fragility is essential since development strategies may, in fact, worsen or trigger more conflict or fragility. For example, donor countries may course aid programs through the private sector, but if the country has a weak capacity infrastructure, doing so can undermine the role of the state and worsen the fragility situation. Accordingly, donor countries need to be aware of the fragility dynamics in the local context, including



subnational issues that may affect fragility situation at the national level. In light of this point, development assistance should be devised to (i) reduce the chances of conflict outbreak, (ii) contribute to peace and stability, and (iii) work within the constraints of an FCAS country. Operationally, this calls for context-specific interventions designed to achieve not only development assistance goals but also country-specific agendas.

Why a Differentiated Approach to FCAS is Needed

Special attention to FCAS countries involves improving resource allocation, regional stability, and international security. Burnside and Dollar's paper shows that impacts of aid to countries with poor institutions have been diminished,² which is in line with the results of World Bank studies in the 1990s. This finding influenced subsequent aid allocations, leading to increased conditionality on policies and institutions to promote growth that FCAS countries are not well-equipped to handle. Although the finding has since been challenged,³ organizations

such as ADB and the World Bank have continued to allocate more resources to "less fragile" or stable countries based on this principle.⁴ Therefore, the allocations are not in line with the country's fragility status, which requires more resources with a longer-term engagement and more stable flows in the FCAS countries.

Although the amount of aid to FCAS countries has been relatively significant, its short-term nature and volatility have created difficulties that to some extent have mitigated its benefits. For example,

² C. Burnside and D. Dollar. 2000. Aid, Policies and Growth. *American Economic Review*. 90 (4).

³ L. Chandy. 2011. *Ten Years of Fragile States: What Have We Learned?* Washington, DC: The Brookings Institution.

⁴ "Less fragile" countries, according to World Bank and ADB definitions, are those with higher scores on the country policy and institutional assessment (CPIA) or country performance assessment (CPA). The fragile countries, on the other hand, are those having a harmonized quantitative cutoff of 3.2 or less, or those having the presence of a UN and/or regional peacekeeping or peacebuilding mission during the past 3 years. ADB's 2013 FCAS list (based on its 2013 CPA scores) includes Afghanistan, Kiribati, the Republic of the Marshall Islands, the Federated States of Micronesia, Nauru, Nepal, Solomon Islands, Timor-Leste, and Tuvalu. There seems to be no clear justification for the CPIA thresholds used to partition fragile from nonfragile states. (Wim Naude et al, eds. 2011. *Fragile States: Causes, Costs, and Responses*. Oxford: Oxford University Press.)

when the financial assistance is given to “balance budgets or provide basic services,” the erratic flows will create problems to the receiving countries.⁵ Aid volatility is about twice as high in FCAS countries compared with other developing countries, while the former needs more stable and longer flows for building social and state institutions.⁶ Burundi, the Central African Republic, Guinea-Bissau, and Haiti, for example, are fragile countries experiencing pronounced aid volatility as their aid inflows can drop by 20%–30% in 1 year and increase by up to 50% in the following year. Kiribati, Nauru, Samoa, Tonga, and Tuvalu are some of the fragile countries that experienced volatility in aid flows. Kiribati has seen aid inflows drop by 28% in 1 year, only to shoot up 86% the following year, while Nauru’s aid inflows increase by 93% in 2006, after dropping 41% the previous year. This volatility is very costly

to the FCAS countries, creating deadweight loss estimated up to 15% of the total aid.⁷ The *World Development Report* (2011) argues that the foundation for successful institutional transformation calls for “time and patience, best-fit approaches appropriate to the local political context, and supporting capacity for institutional reform in the areas of citizen security, justice, and jobs.” It further suggests that institutional transformations require at least a generation of sustained aid and assistance, which is much longer than the common practice of assistance lasting only for about 3 to 5 years. Accordingly, the short-term technical assistance to FCAS states often suffers from short engagement contracts, compelling consultants to advise using international best practices and standards, which may not necessarily be aligned with the country’s goals and local context.

Understanding Fragility

Fragility is a multifaceted concept, and its underlying causes are difficult to fully determine. Extensive research has been undertaken, however, resulting into various frameworks and tools to identify the level and causes of fragility. But fragility is a very dynamic process that has a strong link with conflict. Countries can plunge into or exit from a fragile situation in a relatively short period of time for various reasons, contributing to the different nature and complexity of fragility. In this context, fragility is best viewed as a continuous process involving three different stages: fragile, transitional, and stable conditions.⁸ Figure 1 illustrates the continuous process of fragility by highlighting the different factors causing it. Fragility can improve to a transitional condition and then to a stable situation but some factors can pull a country back into a fragile situation including conflict. The first panel of the figure shows that fragility and conflict are strongly connected, while the middle panel lists conditions for a transitional situation that

may lead to a resilient or stable condition in the third panel provided that the problems are resolved.

ADB’s definition of fragility. ADB previously referred to fragile countries as weakly performing countries (now called fragile and conflict-affected situation or FCAS) characterized by weak governance, ineffective public administration and

Fragility refers to the state’s failure to perform its function effectively and provide basic social services such as health, education, security; incapacity to uphold the rule of law; and failure to provide sustainable sources of income for the population to get out of poverty.

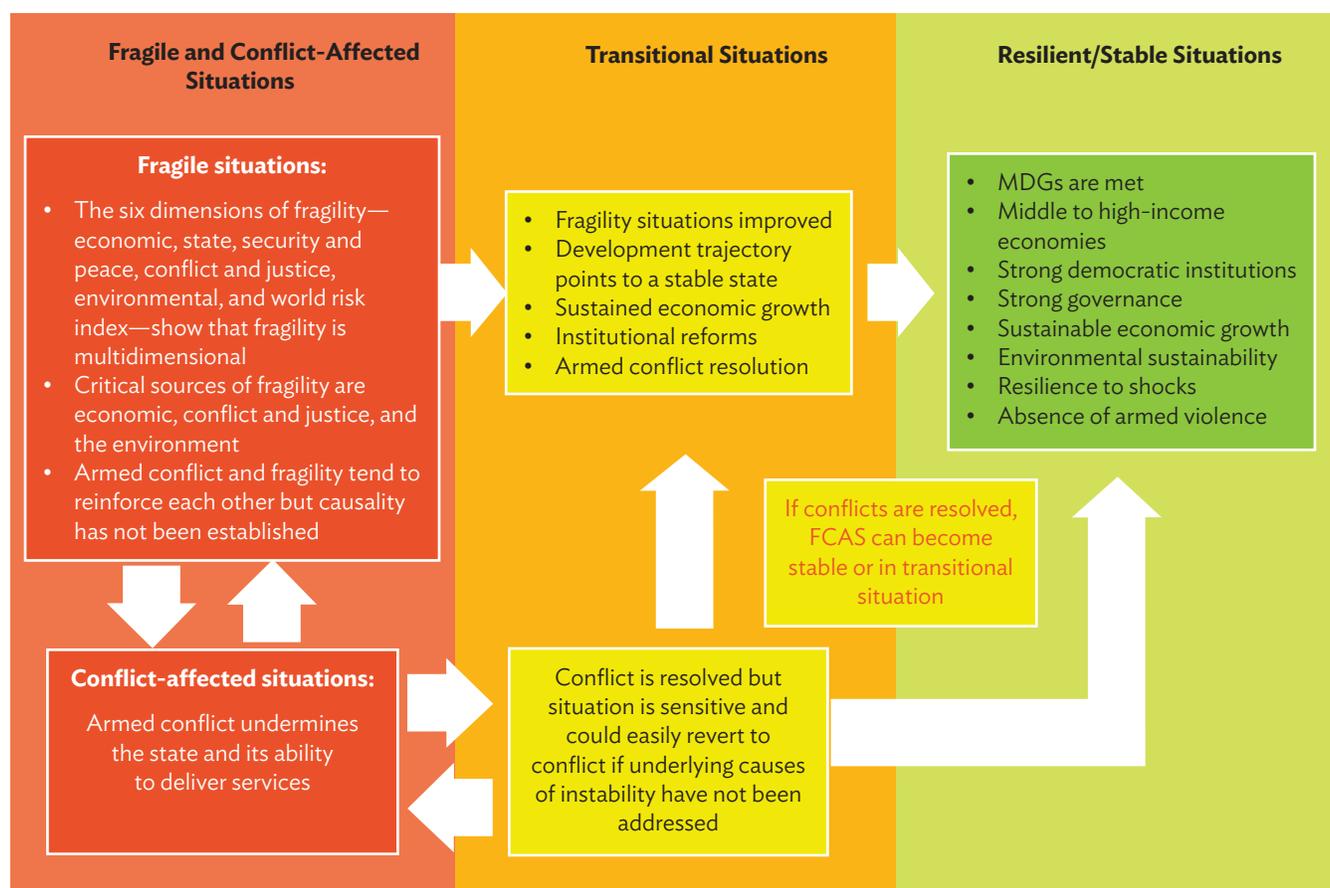
⁵ D. Dollar and V. Levin. 2005. *The Forgotten States: Aid Volumes and Volatility in Difficult Partnership Countries (1992–2002)*. Summary paper prepared for the DAC Learning and Advisory Process on Difficult Partnerships. Oxford Policy Management. Mimeo.

⁶ The World Bank. 2011. *The World Development Report 2011: Conflict, Security and Development*. Washington, DC. p. 281.

⁷ H. Kharas. 2008. *Measuring the Cost of Aid Volatility*. Washington, DC: Wolfensohn Center for Development at the Brookings Institution.

⁸ ADB. 2012. *Working Differently in Fragile and Conflict-Affected Situations: The ADB Experience*. Manila.

Figure 1: Conceptual Framework of Fragility



FCAS = fragile and conflict-affected situations, MDGs = Millennium Development Goals

Source: Adapted from ADB. 2012. *Working Differently in Fragile and Conflict-Affected Situations: The ADB Experience*. Manila.

rule of law, and presence of civil unrest. These countries are commonly small with limited resources and isolated markets. They also receive relatively small amounts of aid compared with other low-income countries. ADB further makes a distinction between fragility and conflict-affected situations. Fragility reflects weaknesses in the state's functional capacity to provide basic security within its territory, institutional capacity to provide basic social needs of its population, or political legitimacy to represent its citizens effectively at home and abroad. On the other hand, conflict is a violent or nonviolent process in which two or more parties disagree about interests and values. Although conflict may provide an opportunity for reform, it can escalate into violence and lead to a fragile situation if it is not managed correctly and properly. Conflict can be

a cause, symptom, or consequence of fragility, but conflict may not necessarily be associated with a fragile situation, as exemplified by the small states in the Pacific islands. They, in general, have no conflicts but are considered by many as fragile.

Taking into consideration other institutions' definitions of fragility, this study proposes defining fragility in terms of a state's failure to perform its function effectively and to provide basic social services, such as health, education, security; incapacity to uphold the rule of law; and failure to provide sustainable sources of income for the population to get out of poverty. Four key dimensions⁹ can be surmised from this definition: economic, political or state, justice, and security and peace. Figure 2 shows the schematic representation of the concept and definition together with the key indicators for each fragility dimension.

⁹ There are four key dimensions of fragility which are derived from the various definitions of fragility by different organizations and institutions. The additional two dimensions —environmental and the world risk index— are derived from literature but are rarely mentioned in formal definitions.

Framework for Developing the ADB Fragility Index

The analytical framework for developing the ADB fragility index (AFI) is based on four main dimensions of fragility: economic, state, conflict and justice, and security and peace. Each dimension contains key factors represented by their indicators as shown in Figure 2. The four key fragility dimensions are as follows:

- **Economic dimension** evaluates the government's overall performance in managing economic aspects including economic management, opportunities, and structural policies. Failing in the economic dimension can compromise stability by undermining a country's income and long-term development prospects.
- **State dimension** reflects key factors defining the state. In this context, state fragility is analyzed in terms of the state's authority, legitimacy, capacity, and effectiveness (ALC).¹⁰ The state dimension reflects challenges in the state's legitimacy and authority, as well as in the government's effectiveness and capacity to deliver basic services.
- **Conflict and justice dimension** captures outbreak or escalation of conflicts, and the fair and equitable enforcement of the law. Conflict may not necessarily be the cause of instability, but it indicates an underlying weakness of the state. Moreover, the state justice aspect is of great concern to a country's poor population.¹¹ The Organisation for Economic Co-operation and Development notes that although justice (and security) has not been considered as a

basic service, the poor would have no access to basic services such as education, health, water, sanitation, and electricity when the state cannot internalize justice and equity.

- **Security and peace dimension** measures aspects of promoting peace and security necessary for the state to be able to deliver the basic services that are essential to human development. A "peace structure" measures institutional frameworks that promote a harmonious society, and in this context security itself can be thought as part of a peace structure.

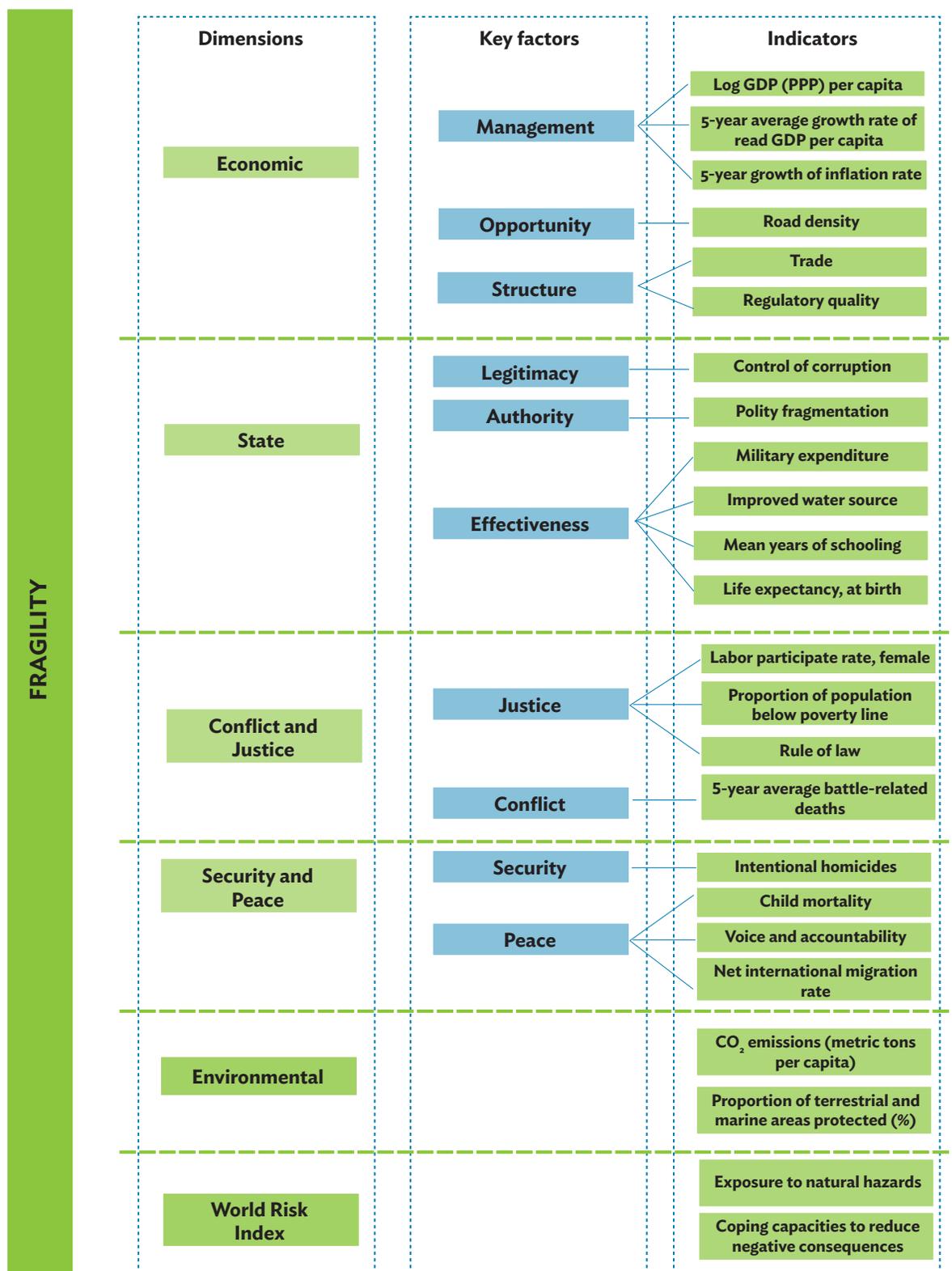
In addition to the four main dimensions above, two additional dimensions are explored in constructing the AFI to consider issues of **environmental sustainability** and **world risk** in terms of natural threats. The environmental aspect is to consider that a country may pursue economic growth at the expense of its environmental sustainability, and the environmental damage may have direct and indirect impacts on the country's economy and welfare. The world risk index is to consider a country's vulnerability to natural hazards as fragile states are especially susceptible due to their limited coping infrastructure.

It follows that for each fragility dimension, some key indicators are selected. Table 1 summarizes the key indicators with their description, data source, and coverage. The rationale for each indicator and other information are further discussed in the full report of the fragility index study in *ADB Economics Working Paper Series* (forthcoming).

¹⁰ One of the defining characteristics of FCAS countries is a capacity issue.

¹¹ Organisation for Economic Co-operation and Development. 2007. *Enhancing the Delivery of Justice and Security*. Paris.

Figure 2: Schematic Representation of Fragility



CO₂ = carbon dioxide, GDP = gross domestic product, PPP = purchasing power parity
 Source: Adapted from the ADB fragility index methodological approach.

Table 1: Fragility Dimensions and Their Indicators

Indicator	Description	Data Source
Economic Dimension		
Natural logarithm of per capita gross domestic product (PPP)	Measures a country's wealth level considering economic development level and population size, as well as an approximation of per capita income	World Bank World Development Indicators, Asian Development Bank Key Indicators Coverage: 39 countries
5-year average growth rate of real GDP per capita	Shows a country's capability to grow to a higher income level	Asian Development Bank Key Indicators Coverage: 39 countries
5-year average annual inflation rate	Shows how a country manages its overall price stability as part of overall stability	World Bank World Development Indicators Coverage: 39 countries
Road density as km of road per 100,000 population	Measures access to road as part of basic service	World Development Indicators Coverage: 33 countries
Trade as % of GDP (trade openness)	Sum of exports and imports of goods and services as a share of GDP, which also reflects a country's openness	World Development Indicators Coverage: 32 countries
Regulatory quality	Captures a perception of state ability to formulate and implement comprehensive policies and regulations to promote private sector development	World Bank's Worldwide Governance Indicators Coverage: 39 countries
State Dimension		
Control of corruption	Measures extent of public power exercised private gain (corruption) and "capture" of state by elites and private interests to indicate strength and effectiveness of a country's policy and institutional framework to prevent and combat corruption (Millenium Challenge Corporation)	Worldwide Governance Indicators Coverage: 39 countries
Polity fragmentation	Indicates the operational existence of a separate polity (state) or polities involving substantial territory and population that the recognized polity (state) exercises no effective authority	Polity IV Project, Center for Systemic Peace Coverage: 4 countries
Military expenditure as % of GDP	Measures magnitude of military expenditure associated with fragility situation	World Development Indicators, CIA Fact Book Coverage: 32 countries
Improved water source (% of population with access to water)	Refers to population using improved drinking water source on premises and other improved drinking water sources (e.g., piped water, tube wells, protected dug wells, spring, and rainwater collection)	World Development Indicators Coverage: 37 countries
Mean years of schooling (of people aged 25 and over)	Average years of education, converted from education attainment levels using standard duration in each level	United Nations Development Programme (UNDP) Coverage: 35 countries
Life expectancy, at birth (year)	Indicates number of years a newborn infant would live if the prevailing patterns of mortality at the time of birth were the same throughout the child's life	World Development Indicators, ADB Key Indicators Coverage: 39 countries

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Table continued

Indicator	Description	Data Source
Conflict and Justice Dimension		
Labor participation rate of female as % of female population aged 15 and over	Captures the gender equality aspect	World Development Indicators Coverage: 32 countries
Proportion of population below the poverty line	Captures percentage of population living below poverty line as defined by the government	Asian Development Bank Key Indicators Coverage: 37 countries
Rule of law	Captures perception of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence	Worldwide Governance Indicators Coverage: 39 countries
5-year average of battle-related deaths (per 100,000 people)	Measures death number from ongoing violent conflicts involving the state and implying the existence of armed conflicts	Uppsala Conflict Data Program, Uppsala University Coverage: 13 countries
Security and Peace Dimension		
Intentional homicides (per 100,000 people)	Estimates unlawful homicides of domestic disputes, interpersonal violence, conflicts over land, inter-gang and predatory violence, and killing by armed groups	World Development Indicators Coverage: 35 countries
Mortality rate of children under age 5 per 1,000 live births	Shows probability of a newborn baby will die before reaching age 5 given the current age-specific mortality rates	World Development Indicators Coverage: 39 countries
Voice and accountability	Captures perception of the extent that the country's citizens are able to participate in selecting their government, and have freedom of expression and association and a free media	Worldwide Governance Indicators Coverage: 39 countries
Net international migration rate (per 1,000 population)	Shows the difference between the numbers of immigrants and emigrants per 1,000 inhabitants	Asian Development Bank Key Indicators Coverage: 32 countries
Environmental sustainability dimension		
CO ₂ emissions in metric tons per capita	Stemming from burning fossil fuels including those produced during consumption of solid, liquid, and gas fuels and gas flaring	Asian Development Bank Key Indicators Coverage: 36 countries
Proportion of terrestrial and marine areas protected	Total size of protected natural areas, including marine area, as a percentage of national territory	Asian Development Bank Key Indicators Coverage: 39 countries
World risk index		
Exposure to natural hazards	Refers to entities like population, built-up areas, and infrastructure component exposed to effects of natural hazards	United Nations University Coverage: 33 countries
Coping capacities	Abilities to minimize negative impacts of natural hazards and climate change through direct action, and to reduce harm and damage	United Nations University Coverage: 33 countries

CO₂ = carbon dioxide, GDP = gross domestic product, PPP = purchasing power parity.

Summary of the ADB Fragility Index

The AFI is developed based on a premise that fragility is a multidimensional issue covering the four dimensions of economy, state, security and peace, and conflict and justice. To widen its spectrum and consider more specific aspects, two additional dimensions, namely, environment and world risk, are included. All result in five different versions of the AFI (See Figure 3):

- Version 0 is the benchmark, for it adopts indicators commonly used in other fragility indexes (i.e., at least three previous fragility indexes used them);
- Version 1 is Version 0 with additional armed conflict dimension;
- Version 2 is Version 1 with additional economic, state, and security and peace indicators;
- Version 3 is Version 2 with additional environmental indicators; and
- Version 4 is Version 3 with additional world risk indicators.

Therefore, more indicators are added in the higher versions of AFI. This, however, does not mean that the higher version is better, and vice versa. They

are complementary and their use depends on the main intention. For a comparison across countries, for instance, Version 0 may serve the purpose while for explicitly considering environmental issue, Version 4 is better.

For each fragility dimension, key indicators are selected and their values are normalized and standardized into an index system to make them comparable; they are then aggregated to form a composite index. Based on the index scores, countries are then ranked and placed into groups of three using cluster and quintile methods. The first cluster and lowest 40% (in terms of scores) are considered fragile, while the second and middle 40% are the weak group, the third cluster as well as the top 20%, are the stable group. Figure 3 shows a schematic representation of the five versions of the AFI. The base version of the AFI, or Version 0, is considered the benchmark or average value if one is to adopt the existing methodologies for constructing a fragility index. The succeeding versions modify the previous version by incorporating a new set of indicators to consider additional aspects of fragility. Version 1 is Version 0 with the additional indicator, and Version 2 is Version 1 with additional indicators, and so on.

Figure 3: Schematic Representation of the Different Versions of the ADB Fragility Index

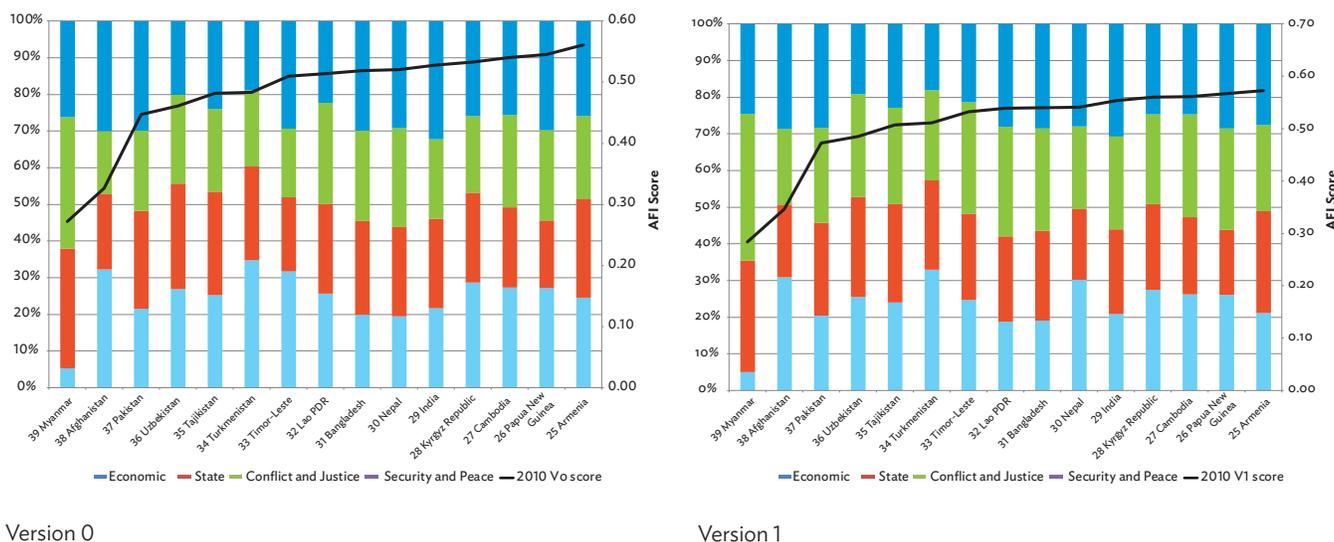
Dimensions	Version 0	Version 1	Version 2	Version 3	Version 4
Economic	<ul style="list-style-type: none"> • Log GDP (PPP) per capita • 5-year average inflation rate • Trade openness 		Additional	<ul style="list-style-type: none"> • 5-year average growth rate of real GDP per capita • Road density • Regulatory quality 	
State	<ul style="list-style-type: none"> • Control of corruption • Military expenditure • Improved water source • Mean years of schooling 	<ul style="list-style-type: none"> • Mean years of schooling • Life expectancy at birth 	Additional	<ul style="list-style-type: none"> • Polity fragmentation 	
Security and Peace	<ul style="list-style-type: none"> • Child Mortality • Voice and accountability • Net international migration rate 		Additional	<ul style="list-style-type: none"> • Intentional homicide rate 	
Conflict and Justice	<ul style="list-style-type: none"> • Labor participation rate (female) • Proportion of population below poverty line (national) • Rule of law 		Additional	<ul style="list-style-type: none"> • 5-year average battle-related deaths 	
Environmental				<ul style="list-style-type: none"> • CO₂ emissions (metric tons per capita) • Proportion of terrestrial and marine areas protected 	
World Risk Index (augmented)				<ul style="list-style-type: none"> • Exposure to natural hazards • Capacities to reduce negative consequences 	

CO₂ = carbon dioxide, GDP= gross domestic product, PPP = purchasing power parity.
 Source: Authors' adaptation from the ADB fragility index definition.

Fragility predictor modeling. A quick assessment of a country's fragility situation can be done using the fragility predictor modeling (FPM) derived from the results of the AFI. First, the FPM is constructed based on the fragility dimensions of the AFI and the standard econometric technique (i.e., by specifying the fragility score as a function of its multiple dimensions represented by their variables). Second, from the estimation results, the key determinants of fragility can be established (i.e., from the variables that are statistically significant in explaining the fragility situation in the econometric model). Third, from the coefficients of the significant variables (i.e., the determinant variables), the weighted average of the determinant variables can be calculated (the sum of all the weights should be equal to 1). The resulting weights show each variable's contribution to the fragility situation. Fourth, a schematic framework in tabular form can be developed based on the procedure highlighted above. The *ADB Economics Working Paper Series* details how this quick fragility assessment can be conducted.

Fragility result and cause. Using the methodological framework and composite nature of the AFI, the cause of fragility can be traced back to its dimensions. Figure 4 illustrates the roles of fragility dimensions in explaining a fragility situation based on results of AFI versions 0 and 1 as an example.¹² They have been arranged based on their fragility scores shown by the line graph. The first panel of the figure, Version 0, shows that the economic dimension (i.e., the first component of the stacked bar chart) is a relatively strong contributor to fragility in Afghanistan, Turkmenistan, and Timor-Leste, where it contributes to more than 30% in the fragility scores. This, however, is not the case in Myanmar, where the economic dimension only contributes less than 10%. The state dimension is very dominant in Myanmar but not in Afghanistan and Papua New Guinea. In the second panel of the figure, Version 1, the conflict and justice dimension is very dominant in Myanmar but not in Timor-Leste, while the security and peace dimension is relatively dominant in Afghanistan and Tajikistan but not in

Figure 4: ADB Fragility Index Results and Roles of Fragility Dimensions, 2010



Note: The line chart shows the level of fragility while the stacked bar chart indicates components of fragility.
Source: ADB fragility index results with cluster grouping method.

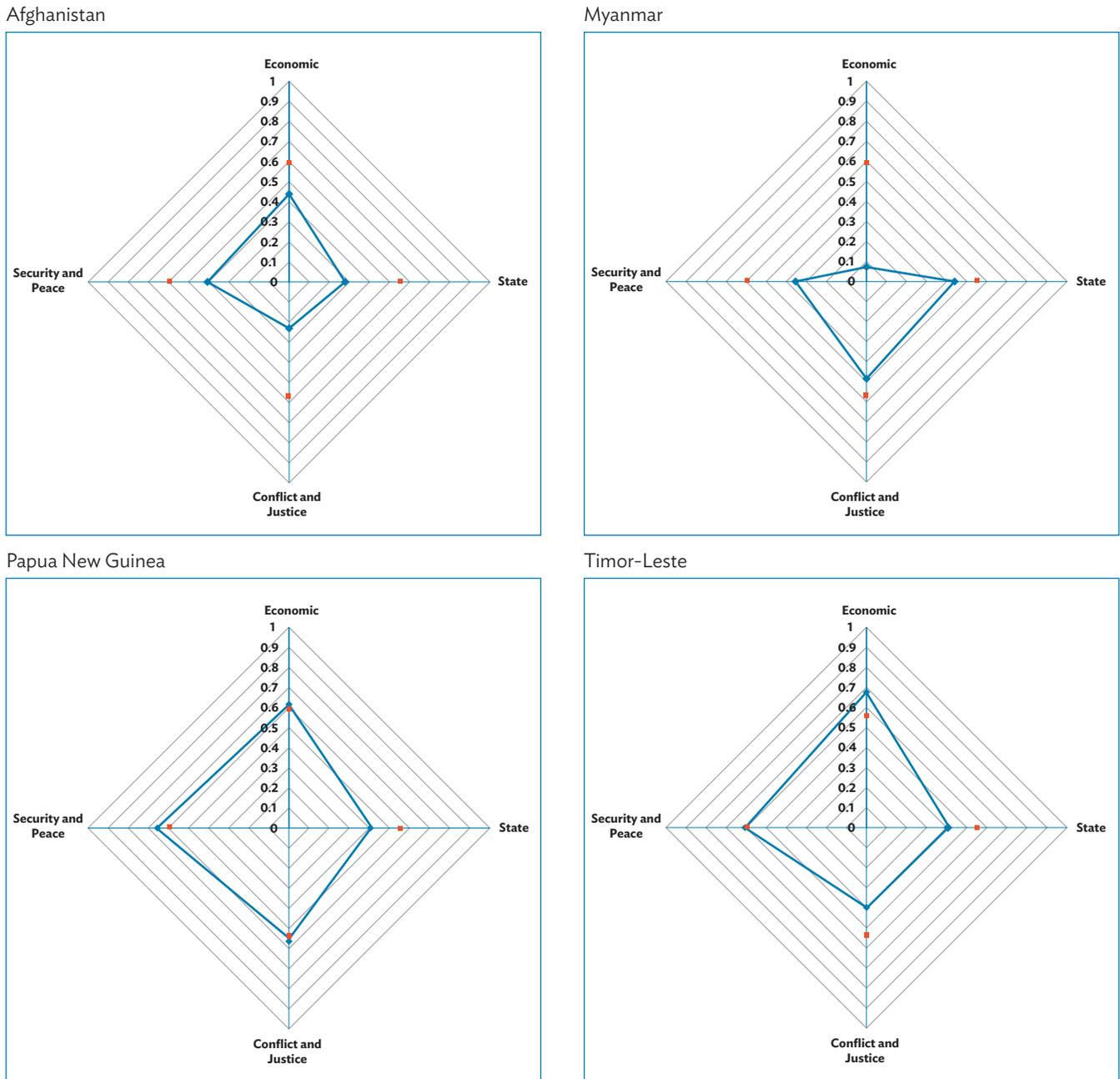
¹² Complete results for all versions of the ADB Fragility Index can be found in the *ADB Economics Working Paper Series*.

Turkmenistan. All this clearly shows that the sources of fragility across countries are very different, calling for a different approach to each fragile situation.

Furthermore, the benchmarking diagram using the radar chart in Figure 5 shows the source and magnitude of fragility in Afghanistan and Myanmar, which are very different including in relation

to their respective benchmarks. The diagram shows the countries' position with regard to each fragility dimension and its benchmarks, which are shown as the dots in the chart to represent the average score values of the fragility dimensions. As described in the methodology section, fragility is examined through its four main dimensions of

Figure 5: Benchmarking Fragility in Afghanistan, Myanmar, Papua New Guinea, and Timor-Leste by Fragility Dimensions, 2010



Note: Blue and red dots represent the actual values and average values respectively.
Source: Developed by authors based on fragility score values

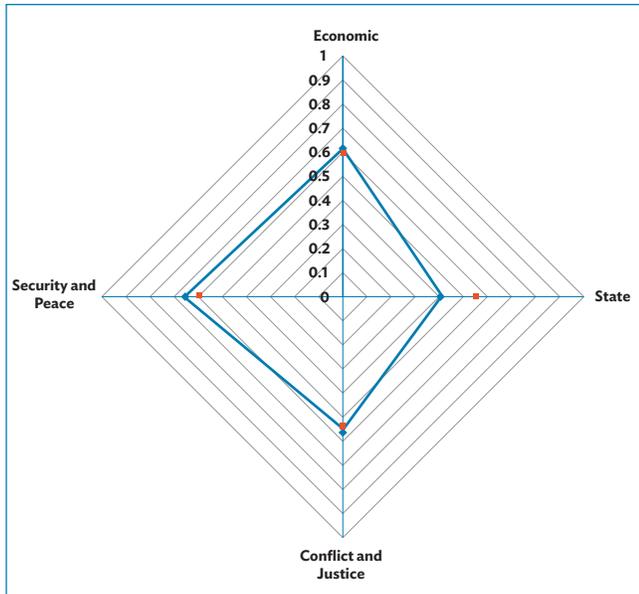
economy, state, conflict and justice, and security and peace. The chart for Myanmar indicates that the economic dimension in the country is very weak, much lower compared with the benchmark, and is the main cause of fragility. On the other hand, the two dimensions of state and conflict and justice in Afghanistan are relatively weak, and therefore

become the sources of fragility. More examples of AFI results for selected countries in Figure 6 further confirm that fragility is driven by different causes, calling for very different policy actions.

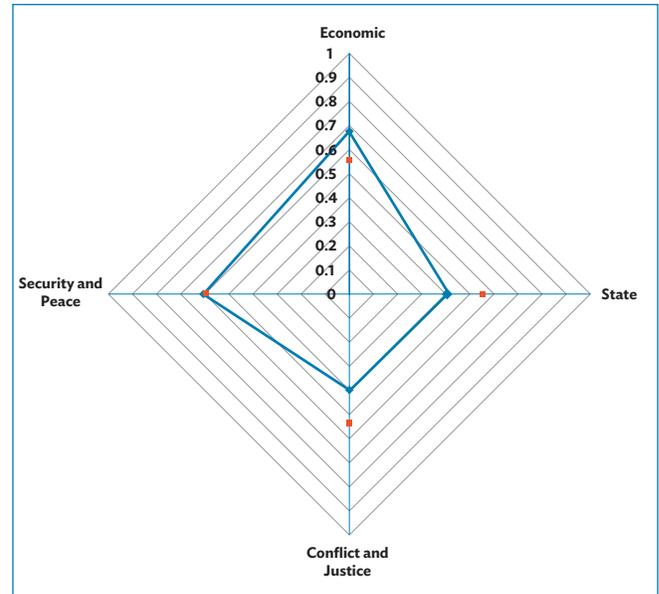
Trends of fragility. Fragility trends can be established by calculating the fragility index for 2 or more years to see the fluctuations of fragility

Figure 6: Benchmarking Fragility of Selected Countries by Fragility Dimensions, 2010
(Version 0)

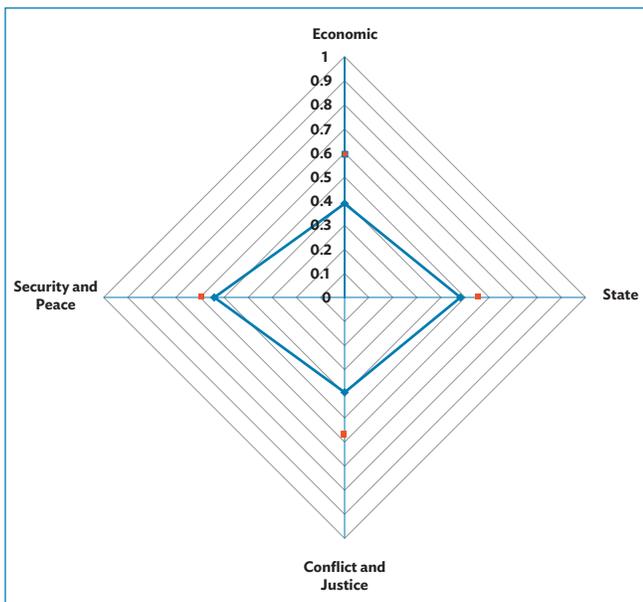
Pakistan



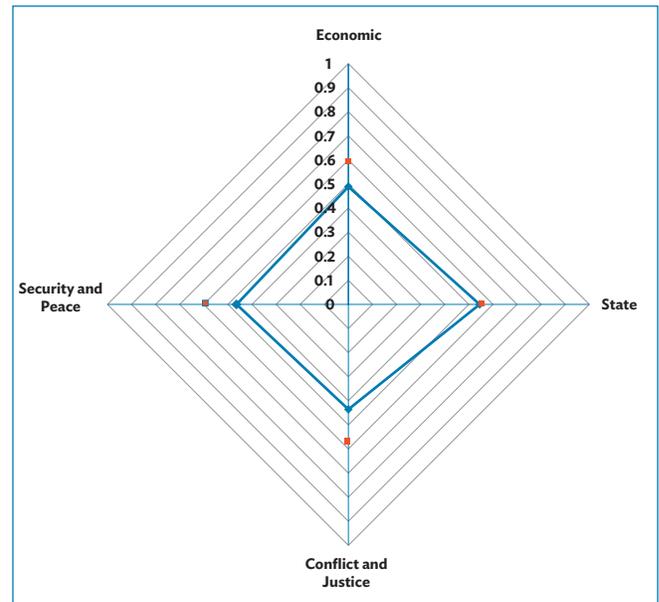
Tajikistan



Turkmenistan



Uzbekistan



Note: Blue and red dots represent the actual values and average values respectively.
Source: Developed by authors based on fragility score values

scores. As the index scores have been normalized and standardized, they are comparable across countries and times so that the fragility trend is reflected in these fluctuations. Table 2 summarizes the results of the AFI for the years 2010 and 2005 based on the cluster grouping method. Only Version 0 and Version 1 are given here as examples; the rest of the results are in the *ADB Economics Working Paper Series*. It can be seen that the fragility situations in Afghanistan and Myanmar have actually improved despite the fact that the two countries have been consistently classified as fragile in both periods of

observation. On the other hand, fragility situations in the Cook Islands and Thailand have worsened even though the two countries have been consistently considered as stable countries. The best trends can be observed in Tuvalu and Vanuatu, which have been in stable condition with improved fragility situations.

Overall trends show that fragility is very dynamic, affecting countries in many different ways, for there are many factors influencing them. This is in line with the view that fragility is a continuous process, as a country can be plunged into and exit from fragility situations for various reasons.

Table 2: Trends of Fragility Based on ADB Fragility Index Results with Cluster Groupings for All ADB Developing Member Countries, 2010 (Versions 0 and 1)

Country	AFI 2010		AFI 2005		Difference	
	Version 0	Version 1	Version 0	Version 1	Version 0	Version 1
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Afghanistan	0.327	0.347	0.308	0.334	0.019	0.012
Armenia	0.561	0.585	0.578	0.602	(0.017)	(0.017)
Azerbaijan	0.563	0.583	0.565	0.590	(0.002)	(0.007)
Bangladesh	0.519	0.540	0.477	0.500	0.042	0.041
Bhutan	0.623	0.639	0.596	0.612	0.027	0.027
Cambodia	0.540	0.561	0.511	0.533	0.029	0.028
China, People's Republic of	0.575	0.590	0.575	0.591	0.000	(0.001)
Cook Islands	0.656	0.683	0.717	0.734	(0.061)	(0.051)
Fiji	0.572	0.601	0.606	0.632	(0.034)	(0.031)
India	0.528	0.554	0.527	0.549	0.001	0.005
Indonesia	0.565	0.586	0.555	0.578	0.010	0.008
Kazakhstan	0.602	0.620	0.585	0.608	0.017	0.012
Kiribati	0.640	0.660	0.624	0.640	0.016	0.020
Kyrgyz Republic	0.533	0.561	0.501	0.531	0.033	0.030
Lao People's Democratic Republic	0.514	0.532	0.480	0.499	0.034	0.034
Malaysia	0.711	0.731	0.724	0.745	(0.014)	(0.014)
Maldives	0.635	0.656	0.585	0.603	0.050	0.053
Marshall Islands	0.616	0.649	0.608	0.640	0.008	0.010

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Table continued

Country	AFI 2010		AFI 2005		Difference	
	Version 0	Version 1	Version 0	Version 1	Version 0	Version 1
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Micronesia, Federated States of	0.625	0.648	0.633	0.653	(0.008)	(0.004)
Mongolia	0.597	0.621	0.595	0.618	0.002	0.003
Myanmar	0.272	0.284	0.242	0.254	0.030	0.030
Nauru	0.635	0.659	0.671	0.694	(0.036)	(0.035)
Nepal	0.521	0.539	0.489	0.500	0.032	0.039
Pakistan	0.447	0.473	0.430	0.457	0.017	0.015
Palau	0.745	0.764	0.735	0.754	0.010	0.010
Papua New Guinea	0.546	0.566	0.529	0.550	0.017	0.016
Philippines	0.592	0.616	0.606	0.630	(0.014)	(0.014)
Samoa	0.645	0.667	0.639	0.659	0.006	0.008
Solomon Islands	0.565	0.587	0.564	0.588	0.001	0.000
Sri Lanka	0.571	0.572	0.590	0.613	(0.018)	(0.040)
Tajikistan	0.482	0.507	0.479	0.503	0.003	0.004
Thailand	0.672	0.690	0.693	0.710	(0.021)	(0.019)
Timor-Leste	0.510	0.541	0.503	0.528	0.007	0.013
Tonga	0.624	0.644	0.604	0.620	0.021	0.024
Turkmenistan	0.483	0.511	0.457	0.484	0.026	0.027
Tuvalu	0.695	0.715	0.686	0.703	0.009	0.011
Uzbekistan	0.462	0.485	0.462	0.488	(0.001)	(0.003)
Vanuatu	0.684	0.702	0.675	0.690	0.009	0.011
Viet Nam	0.597	0.616	0.594	0.610	0.004	0.006

() = negative number, AFI = ADB fragility index

Note: The shades green, yellow, and red in columns (2) to (5) refer to stable, weak, and fragile status based on respective version and cluster grouping method. Positive difference in (6) and (7)—shaded in gray—means an improvement in the fragility situation and vice versa.

Conclusions and Policy Implications

Overall results show different sets of fragile countries depending on the versions and fragility classifications. This is expected and in line with the different results of fragility assessments using ADB's country performance indicators and the World Bank's country policy and institutional assessment methods. The different results are further confirmed when the AFI is applied to countries eligible for the the Asian Development Fund, countries funded by the International Development Association, and ADB developing member countries. Despite this, there are some consistencies in the results, especially for Afghanistan and Myanmar, which have been consistently classified as fragile by all versions of the AFI, which reflects the weakness of the two countries in most of the fragility dimensions. Other

countries, such as Bangladesh, Papua New Guinea, and Uzbekistan, have always been in the lowest-performing group based on the AFI. All this shows that fragility is complex and multidimensional, calling for a careful and differentiated approach to deal with the issues if the engagement is to be effective and addresses the problem. The latter requires a full understanding of the main source(s) of fragility that can sometimes be traced at the subnational level.

Moreover, the different results of the AFI show that the main source(s) of countries' fragility varies considerably and covers a wide spectrum. This requires careful and differentiated engagement in each country if the engagement is to be part of the solution. The observed dynamic trends of fragility further emphasize this point, as a country can be fragile yet



improving or stable yet worsening, and the engagement can strengthen or weaken either the positive or negative trend.

Finally, if a quick method of classifying a country's fragility is needed, a fragility predictor model can be used to come up with a short questionnaire and scoring system that can determine a country's fragility status. This method is successfully demonstrated in this study by defining fragility based on its determinant variables only (see the *ADB Economics Working Paper Series*). All however should be pilot tested and further refined to make them more applicable for most countries and situations.

With regards to engagement in FCAS countries, the failure to achieve the desired results due to institutional and governance capacity issues,¹³ for instance, calls for a differentiated approach. Enabling these countries to improve capacity through institutional and governance reforms, or at the very least creating no negative development impact, should be the central idea of a differentiated approach. In this context, it is important to note that reform, especially in governance, is a long process requiring extended systematic engagement. Even in the best-case scenario, a fragile country could need a generation of engagement to successfully achieve the desired institutional transformations.

Furthermore, the AFI complements the country performance assessment (CPA) by having a more comprehensive way of assessing a country's fragility. While the CPA appears to be focused on the determinants of economic growth and poverty reduction,¹⁴ the AFI captures four to six dimensions that may help stabilize or address the cause(s) of fragility. The AFI can also be used to confirm the FCAS countries identified using the harmonized CPA and country policy and

institutional assessment methods, and to detect additional countries whose fragility is driven by aspects excluded by previous approaches.

ADB operations could draw benefits from the AFI in three distinct ways. The first is in identifying fragile countries and the allocation of resources to these countries. The degree of fragility shown in the AFI is also a useful indicator to guide the depth of the operation. Second, the AFI enables ADB to trace the sources of fragility by individual dimensions and indicators to enable for more targeted and focused operations to address the issue. Third, the AFI trend should be used as a monitoring and evaluation tool to ensure that the engagement is addressing the problem and moving in the right direction, and is part of the solution.

FOR INFORMATION, CONTACT

Patrick Safran
Focal Point for Fragile and Conflicted-Affected Situations
Pacific Department
Asian Development Bank
Tel +63 2 632 5615
psafran@adb.org

OR VISIT

www.adb.org/Pacific and www.adb.org/fragile-situations

FOR TECHNICAL MATTERS ON THE FRAGILITY INDEX,
CONTACT

Guntur Sugiyarto
Senior Economist
Development Indicators and Policy Research Division
Economics and Research Department
Asian Development Bank
Tel +63 2 632 5675
gsugiyarto@adb.org

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¹³ One of the defining characteristics of fragile countries is capacity issues.

¹⁴ World Bank Independent Evaluation Group. 2006. *Engaging with Fragile States: An IFG Review of World Bank Support to Low-Income Countries Under Stress*. Washington DC (Findings on country policy and institutional assessment).