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MEASURING FISCAL SPACE IN EMERGING MARKET AND DEVELOPING ECONOMIES

HOMI KHARAS
AYAN SARKAR

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The International Monetary Fund (IMF) [defines fiscal space](#) as “room in a government’s budget that allows it to provide resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy.” Loosely, it is the gap between what a government spends and the point at which it struggles to finance that spending or service its debt. Developing countries are routinely urged to conserve fiscal space in uncertain times, building buffers against future shocks. But governments can also create future fiscal space by investing in prevention and in economic transformation that yields high returns. The climate adaptation literature is full of microeconomic examples of a stitch in time saving nine: mangrove restoration, drought-resistant seeds, urban green space, early-warning systems, dual-use public buildings. Similarly, the economics of the clean energy transition offer significant opportunities for growth. The list of present-day expenditures that head off much higher future costs grows as climate and disaster shocks become more frequent.

Whether incremental spending adds to fiscal space or subtracts from it is therefore largely a matter of judgment about the impact of the spending. Such judgment also has to anticipate how others will react. Identical expenditures in two countries can have opposite implications for fiscal space depending on how much confidence lenders place in the government's ability to identify and execute the investment and to respond to unanticipated shocks.

To help policymakers make sound judgments on how their spending decisions might impact fiscal space, a model is needed to rigorously quantify the implications for fiscal space of a range of decisions. There are two parts to such a decision: first, whether the marginal returns to a proposed public investment are high enough to justify the spending; second, whether the macroeconomic conjuncture of public debt, revenues, and GDP can accommodate higher levels of debt-financed public investment. One of us has [previously addressed the first issue on marginal returns](#). That work finds the returns appear to be high, compared with the cost of capital, in most developing countries, even those with relatively weak institutions and limited complementary human capital. In this paper, we turn to the question of macroeconomic or fiscal sustainability. This is a rather loose term that we try to put on an empirical footing by creating a model that aggregates a number of readily observable, publicly available indices. Campos, Cysne, and Castro (2026) have built such a model and applied it to countries in Latin America and the Caribbean. This paper adapts that framework to extend coverage to 144 emerging market and developing economies (EMDEs).

I. An unease with existing measures of fiscal space

The motivation for this paper is that existing analyses of fiscal deficits have an overwhelming focus on the creditworthiness of public and publicly guaranteed external debt. This focus gives a dominant role to the primary surplus, with growth rates and interest rates largely treated as exogenous variables. Over two decades ago, César Calderón and colleagues (Calderón et al. 2002) criticized the application of this approach to Latin American countries in the 1980s and 1990s. They found that in five of nine major Latin American economies, cuts in public infrastructure contributed half or more of the total compression in fiscal spending. They argued that such austerity “can be largely self-defeating in the long run, because of its adverse effect on growth and hence on the debt-servicing capacity of the public sector.”

Again, today, the issue of how to balance the trade-off between public investment and public debt is front and center in the policy debate. The trade-off is related to the marginal return on public investment, influenced by the institutional and policy setting, but also depends on any existing debt overhang, foreign exchange reserves, and history of macroeconomic management. The trade-off is, therefore, country-specific. The purpose of this paper is to provide an empirical basis to help policymakers understand how to think through their choices in different country settings.

The most common starting point for fiscal space analysis is to look at external credit ratings and country risk premia on sovereign bonds. Some 70-87 EMDEs have a credit rating from one of the three big rating agencies. However, the rating agency methodologies are opaque, and there is widespread concern that there are [biases in the analysis](#). For example, some studies suggest that African countries face higher sovereign spreads than are warranted by their [economic performance](#). One piece of evidence that is often cited comes from the [Global Emerging Markets Risk Database \(GEMs\)](#): Repayment performance on projects in African emerging markets is stronger than standard market pricing implies, because loss-given-default rates are lower. This gap between perceived and realized risk motivates much of the current unease over reliance on credit ratings and has led to proposals for Africa to [create its own rating agency](#), though that case is itself contested (Chatham House 2025).

A second issue with fiscal space measures is that many countries, mostly low-income countries, are simply not rated. An alternative measure is used for these countries, based on a [debt sustainability analysis \(DSA\) methodology](#) developed by the IMF and World Bank. Having distinct methodologies and concepts for different countries is not satisfactory. It complicates the interpretation and rationale for advice to policymakers. DSAs themselves have also been [criticized for bias](#) (Pinto and Gill 2023), and the methodology is currently being improved (IMF 2025a). A public consultation phase has been completed to introduce more granularity in the type and time frame of risk. This is welcome. The historical [predictive performance of the DSA econometric model was weak](#): across 1,356 country-years, the World Bank-IMF model raised 523 distress warnings against 40 realized episodes. For several years in a row, half of all low-income countries have been categorized as being at high risk of debt distress, but there have been few episodes of actual restructurings. The continued sounding of false alarm bells has reduced the credibility of the DSAs as a dependable tool to inform policy decisions on borrowing, spending, and economic reform.

A third issue concerns domestic debt. Governments increasingly borrow at home, yet credit ratings and DSAs remain focused on external debt and have not incorporated domestic debt in a satisfactory way. (The revised DSAs, however, will have a specific module to assess all public debt, domestic and external, a very welcome addition.) This matters because addressing a domestic debt overhang calls for different policies than an external one; for example, the recent cases of debt restructurings in Ghana and Sri Lanka have been complicated by the need for different treatments of domestic and external debt in a coherent framework.

A fourth issue has to do with how to incorporate the institutional context in a country. Most countries now have fiscal rules to constrain a democratically elected executive's natural tendency to overborrow to finance current spending, while leaving the debt service obligations to be borne by successor governments. The design, credibility, and flexibility in implementation of these rules matter. So does the quality of public expenditure management.

A fifth issue concerns the nature of risk and countries' readiness to respond. Given that fiscal space is often thought of as an economic buffer, to be spent down in response to a natural disaster, for example, it is surprising how little attention is given to elements of risk and the likely required response. The revised DSA methodology does include scenario testing for financial risks, such as domestic bank freezes or runs, but does not systematically assess either the vulnerability of a country to climate and natural disaster risks, or the impact of such shocks on the budget.

This paper proceeds as follows. Section II sets out the methodology and data and documents our modifications to the Campos et al. framework. We measure fiscal space across eight similar dimensions, combined into a single framework, but we have adapted the underlying variables to allow for greater country coverage. Section III shows the results: Each of the 144 economies in the sample receives a composite fiscal space index score between 0 and 100. Section IV turns to a process of clustering the countries. The empirical analysis suggests that countries can best be clustered into two groups. The process of clustering permits a discussion of which determinants of fiscal space are most important in positioning each country into its respective group. Section V contrasts our results with alternative measures of fiscal space and discusses applications. Section VI concludes.

II. Methods and data

Policymakers need a tool that integrates market pricing, debt dynamics, and institutional capacity into a [single operational framework](#). Following Campos et al., we treat fiscal space as a structural condition diagnosed across eight dimensions at once (Table 1).

Table 1. The eight dimensions of fiscal space: rationale and our construction

Dimension	Rationale for inclusion	Our construction
(1) Fiscal predictability	Ability to accurately forecast deficits and adjust expenditures to reflect revenue shortfalls	Difference between budget deficit/GDP ratio and ratio forecast one year previously, extracted from the IMF WEO
(2) Domestic revenue mobilization	How much domestic revenue is mobilized	IMF WEO general government revenue as a share of GDP
(3) Sustainable debt	Commitment to a sustainable and manageable debt burden	IMF WEO general government gross debt to revenue ratio
(4) Macroeconomic stability and growth	Growth and inflation	IMF DataMapper real GDP growth and inflation
(5) Risk management and economic stability	Market perceptions of sovereign risk	Damodaran country risk premia
(6) Institutional governance	Quality and effectiveness of institutions, including government quality, legislative elections, and subnational autonomy	World Bank Worldwide Governance Indicators
(7) Fiscal rules	Presence and effectiveness of fiscal rules, fiscal councils, escape clauses, and monitoring	IMF Fiscal Rules Dataset
(8) Climate change and disaster preparedness	Readiness and exposure to climate and disaster shocks	ND-GAIN country index

Note: Campos et al. draw all eight indicators from [FISLAC](#), the Inter-American Development Bank's fiscal rules compliance database. Our sources are public and annually refreshed, so the framework can be readily updated.

The first dimension is the predictability of fiscal accounts. Fiscal space can be quickly eroded if expenditures are based on overly rosy revenue predictions or if they are not adjusted to revenue shortfalls. We take the budget deficit forecast in year $t+1$ from IMF World Economic Outlook (WEO) data published in year t and compare that with actual $t+1$ deficits published later by the WEO. This gives a measure of the "unexpected" or "unmanaged" component of a fiscal shock.

The second dimension focuses on revenue mobilization. Countries with stronger tax efforts are able to service far higher levels of debt. Our indicator is general government revenue, available in the WEO.

The third dimension deals directly with debt. We use total general government gross debt (domestic and external) as a share of revenue as our indicator. As [Stefan Gerlach](#) has shown for advanced economies, debt-to-GDP and revenue-to-GDP are essentially uncorrelated across countries; the same arithmetic operates with far greater volatility across EMDEs, where revenue shares range from single digits to the low 40s. [Amegashie \(2023\)](#) argues on theoretical grounds that debt-to-GDP is a poor management tool for low-income countries precisely because GDP and revenue diverge.

The fourth dimension accounts for macroeconomic performance, specifically growth and inflation. Countries with more rapid growth can sustain higher levels of debt. Conversely, inflation is already an indicator that countries are losing control over macroeconomic stability, with a greater likelihood of debt servicing difficulties in the future.

The fifth dimension addresses market perceptions of risk. Aswath Damodaran, a professor at New York University's Stern School of Business, computes and publishes a composite metric of sovereign risk based on Moody's ratings (or S&P ratings where Moody's are unavailable) and credit default swap spreads.

The sixth dimension explicitly accounts for institutional strength, proxied by the World Bank's Worldwide Governance Indicators.

The seventh dimension is an alternative look at institutions, focused on the design, compliance, and effectiveness of fiscal rules and fiscal councils. Data is taken from the IMF's Fiscal Rules Dataset.¹

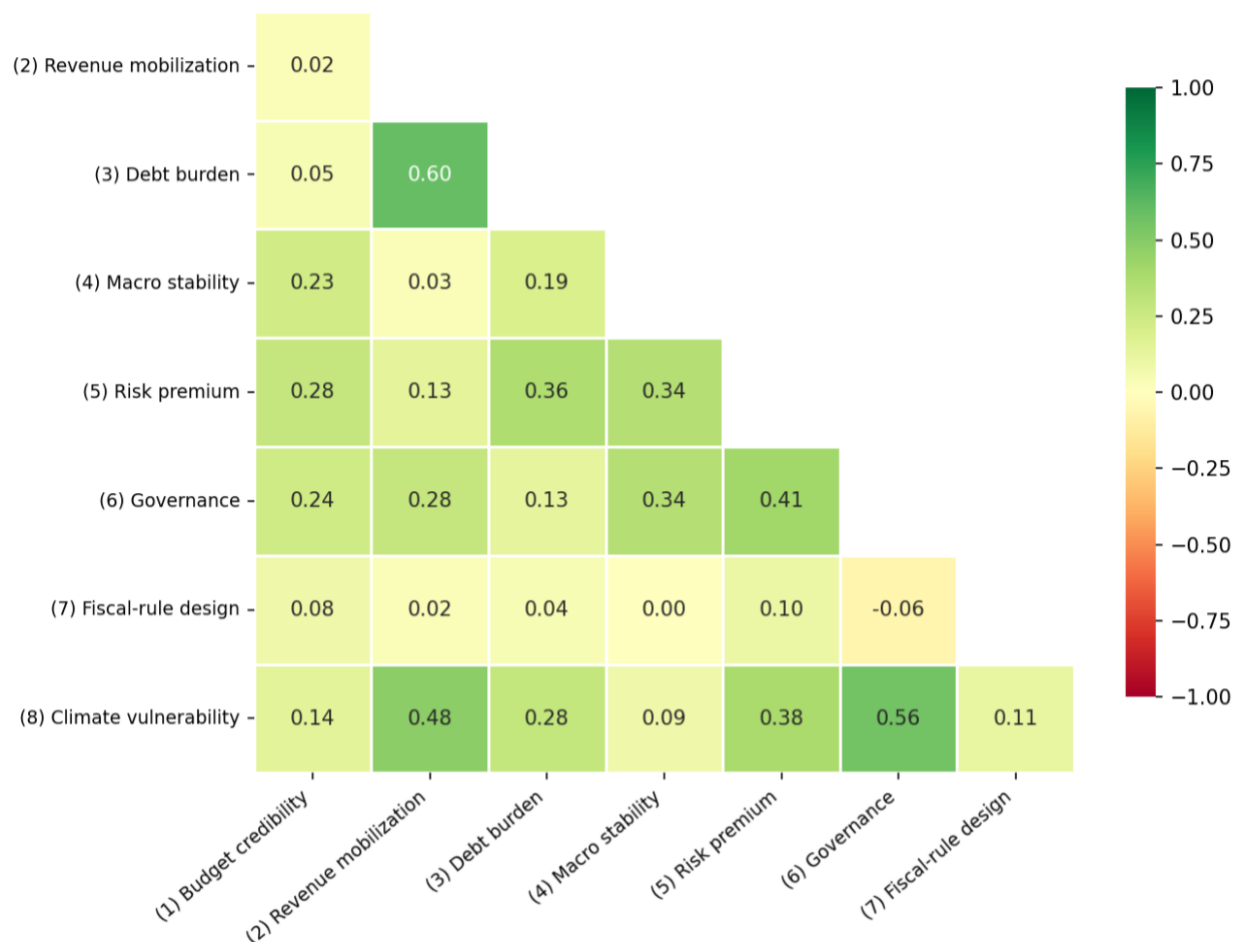
The eighth dimension reflects each country's exposure to natural disasters and readiness to respond. The University of Notre Dame regularly publishes a Global Adaptation Initiative Country Index, [ND-GAIN](#). The index compares a country's exposure, sensitivity, and adaptive capacity to shocks affecting water, agriculture, health, infrastructure, food, and ecosystems. It then compares this with a country's readiness to respond, based on its economic, governance, and social conditions.

The variables we have chosen to measure these eight dimensions are:

- Readily available. Every input is published, freely available, and documented. Nothing depends on a proprietary model or a judgment made behind a paywall. Thus, results are fully reproducible.
- Annually updated. Each source publishes yearly across effectively the whole EMDE universe (although the data may not change yearly), so the quantification of fiscal space is always up-to-date.
- Broad coverage. We have avoided indicators where coverage is confined to a narrow set of countries. The original Campos et al. paper relied on indicators in the Inter-American Development Bank's Fiscal Sustainability for Latin America and the Caribbean data ecosystem (FISLAC). As the ecosystem does not cover countries in other regions, we have replaced the data with measures that are similar in spirit but have broader coverage.

¹ As an additional metric, we experimented with using the IMF's Public Expenditure and Financial Accountability program scores (PEFA). PEFA scores are available for 77 countries from our full data base of 144 countries. They are provided on a four-part ordinal score. The correlation between PEFA scores and the fiscal rules data was only 0.05, so PEFA contains additional information. However, when re-running our analysis PEFA scores added to the fiscal rules cluster (with an equal weight), only one country (Cambodia) changed in the clustering for 2015-19, and only two changed in the 2022-25 clustering (Benin and Honduras). Because the impact of including PEFA appeared minimal, and as country coverage is so much smaller and the data is not frequently updated, we decided to exclude it from our final analysis.

Figure 1. Indicator correlation (2015-2019)



Note: Correlation matrix of the eight indicators (2015-2019 validation vintage). No pair exceeds $|r| = 0.7$.

We have not tried to make each dimension orthogonal to the others. There are clear overlaps by construction (see Figure 1). For example, the climate readiness dimension includes an assessment of the governance institutions that permit a country to respond to a natural disaster. Debt ratios are closely linked to revenue generation. But each dimension holds some independent information. Even after accounting for the income and governance elements of climate readiness, the climate dimension still separates the two groups. Of the three main institutional dimensions—climate readiness, governance, and fiscal rules—only governance and climate readiness are highly correlated. Governance is not associated with the design and compliance of fiscal rules.

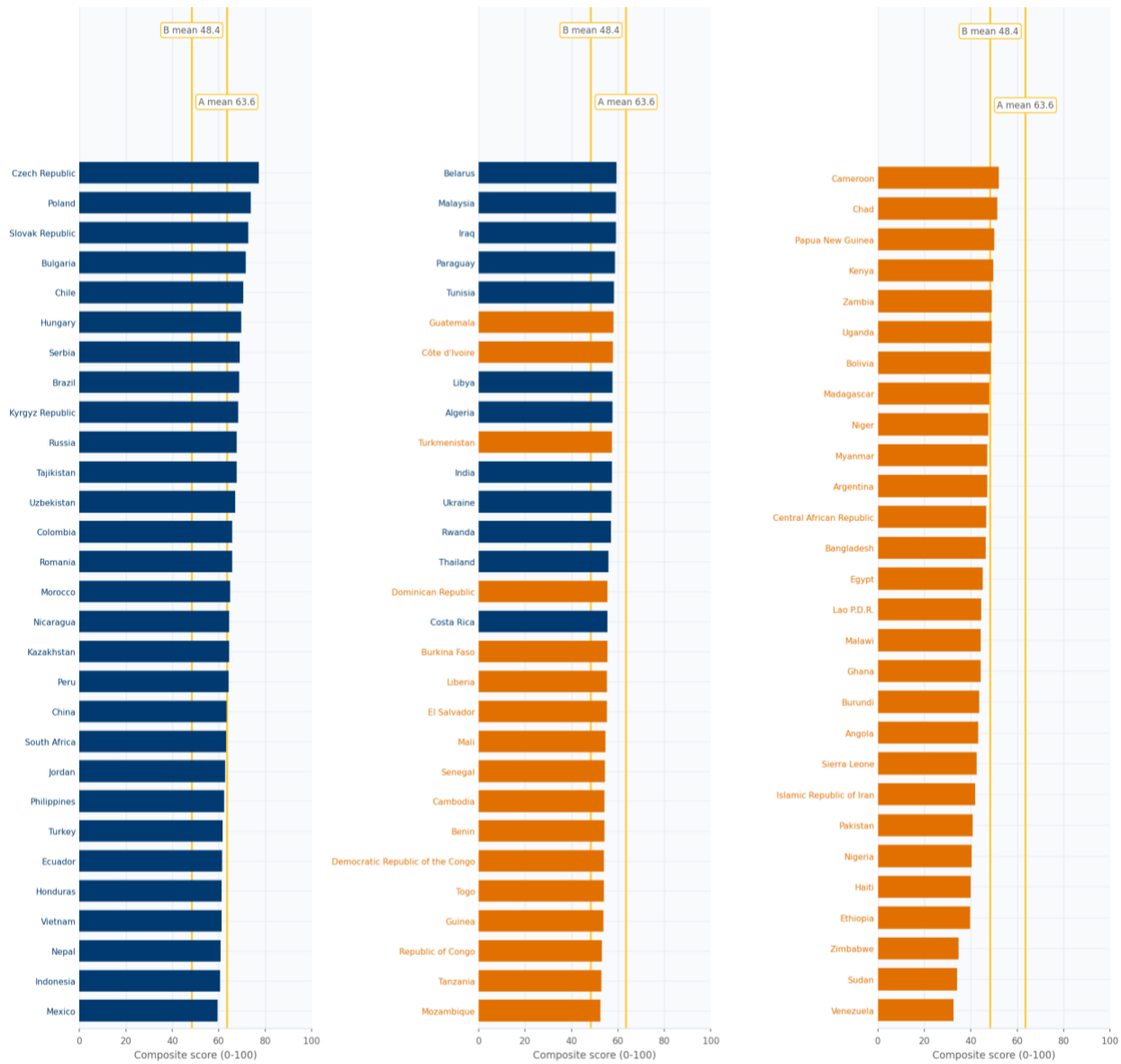
Our database spans 2014-2025, and covers 144 countries, across sub-Saharan Africa (47), Latin America and the Caribbean (32), East Asia and the Pacific (24), Europe and Central Asia (24), the Middle East and North Africa (9), and South Asia (8). Each variable is standardized and rescaled from 0 to 100, with higher scores being better.

III. Results

Each economy receives a composite fiscal space score for each year, the equal-weight mean of the eight indicators. Figure 2 displays the average score for 2022-2025. (For convenience, the figure shows only countries with more than 5 million people. The scores for the full list of countries are provided in the appendix.) The colors of the bars represent two different clusters into which countries are placed (see below for clustering methodology). As we explain below, the interpretation of the fiscal space measure depends on a country's structural characteristics. It is not necessarily linear. The score tells how a country ranks at any given moment. It should not be interpreted as a cardinal estimate of an ability to borrow some percentage of GDP but as an ordinal ranking across the eight indicators. The cluster tells what kind of position a country is in and describes its closest peers.

The score and the cluster classification are related but do not measure the same thing. We show that almost all debt “events”—defined as years when a country experienced any of a sovereign default or missed payment, a distressed debt restructuring, accumulation of external arrears, a request for treatment under the G20 Common Framework, or an IMF-supported program with exceptional access—have been drawn from one of the clusters (termed Cluster B) but not the other (Cluster A). On this basis, we conclude that when a country has the structural characteristics that place it in Cluster B, it is susceptible to a debt event. In the terminology used by others, we might call these countries with potential solvency problems (Diwan et al. 2026).

Figure 2. Composite fiscal sustainability scores (2022-2025)



Note: Composite scores, the 86 economies above 5 million people, 2022-2025 vintage. Blue is Cluster A, orange Cluster B. Yellow lines mark the cluster means within this subset, 63.6 and 48.4. The full 144-economy ranking is in the appendix.

IV. Clustering

Why two groups?

Cluster analysis can uncover hidden patterns in data and help interpretation by identifying natural groupings. It is a machine-learning method that sorts data into k different groups, with the number k determined by the data. We use the silhouette method to determine k . The method measures the distance between any observation and the centroid of observations within its cluster and compares this distance with the distance to all points in a neighboring cluster. The estimates are repeated for different numbers of clusters.

We calculated the silhouette score for two to seven clusters; the highest score was generated when the observations were separated into two groupings. In our interpretation, we classified Cluster A as a set of countries that could be considered to still have a reasonable amount of fiscal space (meaning they are unlikely to be subject to a debt event), and Cluster B as a set where fiscal space could be said to be more constrained.

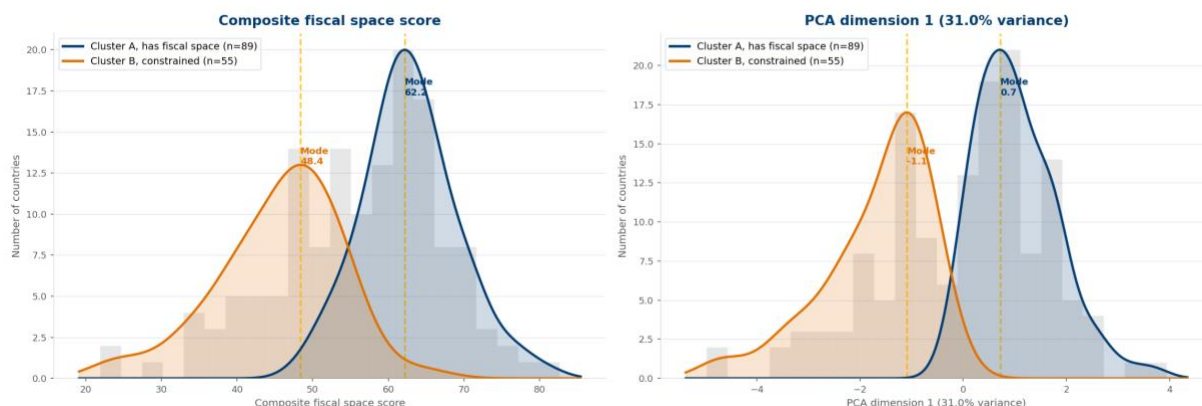
Of the full sample of 144 countries, 85 are in Cluster A and 59 in Cluster B. However, Cluster A has a disproportionate number of small and micro states.

As shown in Figure 2 above, the classification of countries into these two groups does not neatly correspond to their raw fiscal space score. Some countries, such as Guatemala and Côte d'Ivoire, have high fiscal space scores but are still classified as belonging to Cluster B, while other countries, such as India, Thailand, and Costa Rica, have lower raw scores but are classified as belonging to Cluster A.

Cluster overlap

Figure 3 shows the distribution of scores by cluster. The LHS panel shows the composite score; there is a clear bimodal pattern of countries. The modes of the two clusters are also shown. Cluster A countries have a significantly higher fiscal space score. However, about a quarter of the sample sits in an area of overlap between Clusters A and B. These 36 countries should be seen as boundary cases, close to the dividing line between the two clusters. They share features of both groups, and a small change to one indicator, or a different weighting of the eight, would move them across the line. For these countries, what matters more is to understand which dimension puts them near the line, not which side of it they fall on. To help with this understanding, the RHS of Figure 3 shows the same bimodal distribution across the first principal component separating the two groups. The number of countries in the overlap area goes down, and the cluster separation is more marked.

Figure 3. Bimodal distributions of Clusters A and B (2015-2019)



Note: Distribution of composite scores and of the first principal component, by cluster. Dashed lines mark cluster modes.

What separates the groups

Clusters A and B can be separated across each of the dimensions. The means of each dimension in each cluster are shown in Table 2, ordered by the importance of the dimension in separating the clusters. In each case, the mean score in Cluster A is significantly higher than the mean score in Cluster B.

The most important distinguishing characteristics are domestic revenue mobilization, climate vulnerability, and sustainable debt. More standard quantitative fiscal variables come next: governance and sovereign risk. Macroeconomic stability is only a modest separator. Fiscal predictability and fiscal rule design and compliance do not differentiate between the two groups (but are important in within-group positioning).

This decomposition of variables has an important interpretation. Countries with fiscal space, those we group in Cluster A, are not necessarily those with low debt. They have stronger revenue mobilization, giving them room to maneuver after a shock; they are better prepared for a disaster; and they have stronger institutions and better governance. This should not be taken as meaning that debt does not matter. It does. But high debt levels can be an indicator of a successfully growing economy with high marginal returns or a signal of a failed economy where debt has not been used for capital (human, physical, social, or natural) accumulation. Conditioning debt levels on other characteristics is key to its proper interpretation.

Table 2. Group means by cluster, k = 2 (2022-2025)

Indicator	Cluster A mean	Cluster B mean	ANOVA variable contribution ²
Domestic revenue mobilization	75.3	29.4	27.2%
Climate change and disaster preparedness	50.4	39.4	26.6%
Sustainable debt	58.3	26.2	16.8%
Institutional governance	47.5	39.0	13.6%
Risk management and economic stability	77.8	66.1	8.5%
Macroeconomic stability and growth	76.4	62.1	5.7%
Fiscal predictability	49.9	55.0	1.0%
Fiscal rules	75.6	73.3	0.5%

Note: Rows ordered by share of the between-group sum of squares (one-way ANOVA decomposition). The top six dimensions (revenue, climate, debt, governance, sovereign risk, and macroeconomic stability) differ between groups at $p < 0.001$; fiscal predictability ($p = 0.10$) and fiscal rules ($p = 0.25$) do not differ significantly.

The dimensionality discussion is useful for identifying the key attributes that distinguish between the clusters. It also permits individual countries to identify where their performance is weakest. For example, one-third of Cluster B countries have weak macroeconomic fundamentals and revenue mobilization. Without improving on these fronts, improvements in governance may not suffice to reposition them into Cluster A.

Policy improvements can shift countries from one cluster to another. We compared the list of countries falling into each cluster in two periods, 2015-2019 and 2022-2025. Twelve of the 144 countries changed clusters. Eight moved from Cluster A to Cluster B;³ four—Algeria, Iraq, Libya, and Mauritania—moved the other way. Not every move from A to B reflects genuine deterioration. Because k-means draws a single hard boundary, a few economies sit right at the seam and are cluster-unstable. Two countries that our 2015-2019 data placed narrowly in Cluster A—Argentina and El Salvador⁴—were in fact already in or entering distress during that window (Argentina's 2018 IMF program and 2019 selective default being the clearest case). Their move to Cluster B by 2022-2025 is the model correcting a near-miss, not a country falling from health.

² ANOVA is analysis of variance.

³ Argentina, Bolivia, Burkina Faso, Cambodia, Côte d'Ivoire, Dominican Republic, El Salvador, and Senegal.

⁴ Pakistan, pre-classified in Cluster B, reached acute distress in 2022-23 but crossed none of our formal event thresholds and had no confirmed exceptional-access program.

V. Implications and interpretation

How useful is this measure of fiscal space and of cluster groupings? We undertook a series of thought experiments. First, we reviewed whether the countries in our constrained fiscal space group, Cluster B, were more likely to have a debt "event." Our measure of fiscal space is not designed to signal debt distress, but constrained fiscal space is almost certainly a precursor of debt distress; otherwise, a country could simply borrow its way out of the problem. Nineteen economies experienced a debt distress event after 2019. The 2015-2019 clusters had already placed 13 in the constrained group: Belize, Chad, Egypt, Ethiopia, Ghana, Kenya, Lebanon, Malawi, Mali, Niger, Sri Lanka, Suriname, and Zambia. Six fell in Cluster A. Three of the Cluster A countries that suffered later debt distress were affected by war and geopolitical sanctions that structural and fiscal indicators are not built to anticipate—Russia, Belarus, and Ukraine. The other three cases—Argentina, Ecuador, and Senegal—were narrowly in Cluster A on the 2015-2019 data: Argentina is a seam case, and Ecuador is the one fundamentals-driven event our clusters misplaced.

Senegal has a different explanation. The clustering algorithm is based on publicly available data. Despite having relatively low domestic revenue mobilization, Senegal was growing rapidly and had strong fiscal rules in place. It was accordingly placed in Cluster A. However, in September 2024, an incoming government disclosed that deficits and debt had been systematically understated. A [Court of Auditors report](#) in February 2025 found hidden deficits averaging 5.5% of GDP a year from 2019 to 2023, and debt was estimated to be 25 percentage points of GDP higher than reported. The IMF opened a misreporting process and [suspended its \\$1.8 billion program](#), and put the undisclosed stock above \$11 billion. Debt is now reported above [130% of GDP](#), and the program remains suspended as of July 2026.

As a second experiment, we correlated our measure of fiscal space with individual credit rating agency assessments and with the IMF Low-Income Country debt sustainability analysis. In each case, the correlation coefficient is between 0.65 and 0.66. All five sovereigns the IMF classifies as experiencing debt distress are in the constrained group, as are six of the 12 it rates high risk, suggesting that while there is a significant overlap between our fiscal space metrics and these other predictors of debt distress events, there is other information as well. This is to be expected because fiscal space and debt sustainability metrics address different questions. The fiscal space analysis is about opportunities for fiscal policy while maintaining a sustainable macroeconomic frame, while the debt sustainability analysis addresses the far narrower question of the likelihood of a debt distress event in the near future.

Third, we looked at the default rates on multilateral institution projects in countries. We would expect to see better-managed countries, with ample fiscal space, being more successful than other countries. Countries with limited fiscal space are often confronted by stop-go problems as they implement projects, slowing down when funds are scarce, with a negative impact on project returns. Indeed, we find the average default rate in Cluster A to be significantly below that for countries in Cluster B.

Table 3. External comparisons

Test	Result	Sample
1. GEMs realized private default rates	A 2.84% vs B 6.70%, Mann-Whitney $p < 0.0001$; composite vs default rate $r = 0.52$	$n = 87$ matched
2. IMF LIC-DSA risk ratings	Composite vs IMF DSA rating $r = 0.65$. Cluster A 68% rated low or moderate (13 of 19), Cluster B 31% (5 of 16). All five in-distress sovereigns are in Cluster B	$n = 35$ rated
3. Credit ratings (S&P / Moody's / Fitch)	$r = 0.66 / 0.66 / 0.65$	$n = 81 / 87 / 70$
4. Debt-distress events, 2020-2024	The 2015-2019 clusters place 13 of 19 onsets in Cluster B (OR 5.0, one-sided Fisher $p = 0.0018$); on the current 2022-2025 clusters, 15 of 19 (OR 8.0, $p = 0.0001$). The 2014 clusters place 6 of 8 of the 2015-2019 onsets in Cluster B (OR 2.5, $p = 0.22$).	$n = 138$ (economies already in distress excluded)

Note: Distress events are default, distressed restructuring, external arrears, Common Framework treatment, or IMF exceptional access. Correlations are significant at $p < 0.001$. As a fidelity check, our binary split agrees with Campos et al.'s groups collapsed to sustainable and constrained for 12 of 20 Latin American and Caribbean countries; the disagreements are Argentina, Bolivia, the Dominican Republic, Ecuador, El Salvador, Honduras, Jamaica, and Nicaragua, each of which our 2015-2019 data places in the fiscal-space group while Campos et al. place it in the constrained group.

Implications for climate finance

[By 2030](#), most greenhouse gas emissions will come from developing countries excluding China. A major issue for these countries is whether they have the fiscal space to undertake the large investment in climate action (and complementary investments in nature-related areas) that is needed. Both mitigation and adaptation priorities are growing in scale.

Nearly six in every 10 countries are in Cluster A today, suggesting they have some scope to expand climate and nature-related investments. These countries also tend to be larger and richer than countries in Cluster B and account for roughly 80% of the total investment needs of developing countries estimated by the [Independent High-Level Expert Group on Climate Finance](#), with Cluster B accounting for the remaining 20%, a split that holds across the period.

Investments in Cluster B countries are the most difficult to finance. These countries collect 17% of GDP in revenue, compared with 35% in Cluster A countries. Cluster B countries are therefore more dependent on external capital and face a higher cost of capital as well.

VI. Concluding thoughts

Fiscal space is a qualitative concept requiring a quantitative framework to be useful for policymakers.

A range of indicators, some economic, some institutional, some reflecting exposure and response to shocks, are now publicly available and should be incorporated into policy.

There is a core conceptual difference between fiscal space measures and credit ratings or predictive models of debt distress or sustainability. Fiscal space models are forward-looking and attempt to answer questions such as "how much headroom does a government have to invest in its development priorities?" They are particularly important for making judgments when governments shift to new development strategies, such as climate action.

Debt sustainability assessments and credit ratings are risk classification exercises asking about the probability that existing policies or debts become unsustainable. The two become intertwined because often the policy variable of greatest importance in debt sustainability models is the fiscal deficit. However, DSA models are structurally biased to reduce levels of public expenditure, investment, and debt, whereas fiscal space models look to see whether investments and expenditures can be increased as a way of creating additional fiscal space in the future when returns, or avoided costs, materialize.

The massive shocks associated with COVID-19 and the war in Ukraine have reduced fiscal space in many countries. Eight additional countries today have more constrained fiscal space than in the five pre-COVID years, 2015-2019; only four countries shifted the other way, moving from a constrained to an unconstrained classification. While most countries took on more debt, many also took other measures to restore fiscal space: domestic revenue mobilization, improved climate readiness, and stronger institutional governance. Eighty-five of the 144 EMDEs in our sample may have the fiscal space to do more, although countries in boundary cases, where fiscal space scores overlap with those of Cluster B, should be cautious. These are the prime candidates for implementation of the three-pillar approach of the IMF and World Bank: structural reforms and revenue mobilization, enhanced external financing, and use of risk-sharing instruments.

Climate readiness—the difference between a country's ability to respond to a natural disaster and its physical exposure to such shocks—is one of the most important determinants of fiscal space, along with revenue mobilization and governance. Climate risk is often modeled as unambiguously negative for fiscal space, but governments that have a demonstrated readiness to respond, and have already made adaptation investments to reduce the economic costs of a natural calamity, can actually expand their fiscal space. We find that institutional and fiscal preparedness for shocks matters at least as much as physical exposure.

A large number of countries—59 out of our sample of 144 EMDEs—are still fiscally constrained. These countries pose the greatest challenge for the international community. Without special attention, they will not be able to make investments to contribute to global challenges or offset hurdles to their own economic development. The decline of concessional finance makes the challenge even greater than before.

Full methodology, validation details, indicator correlations, and country-level classifications are in the technical appendix.

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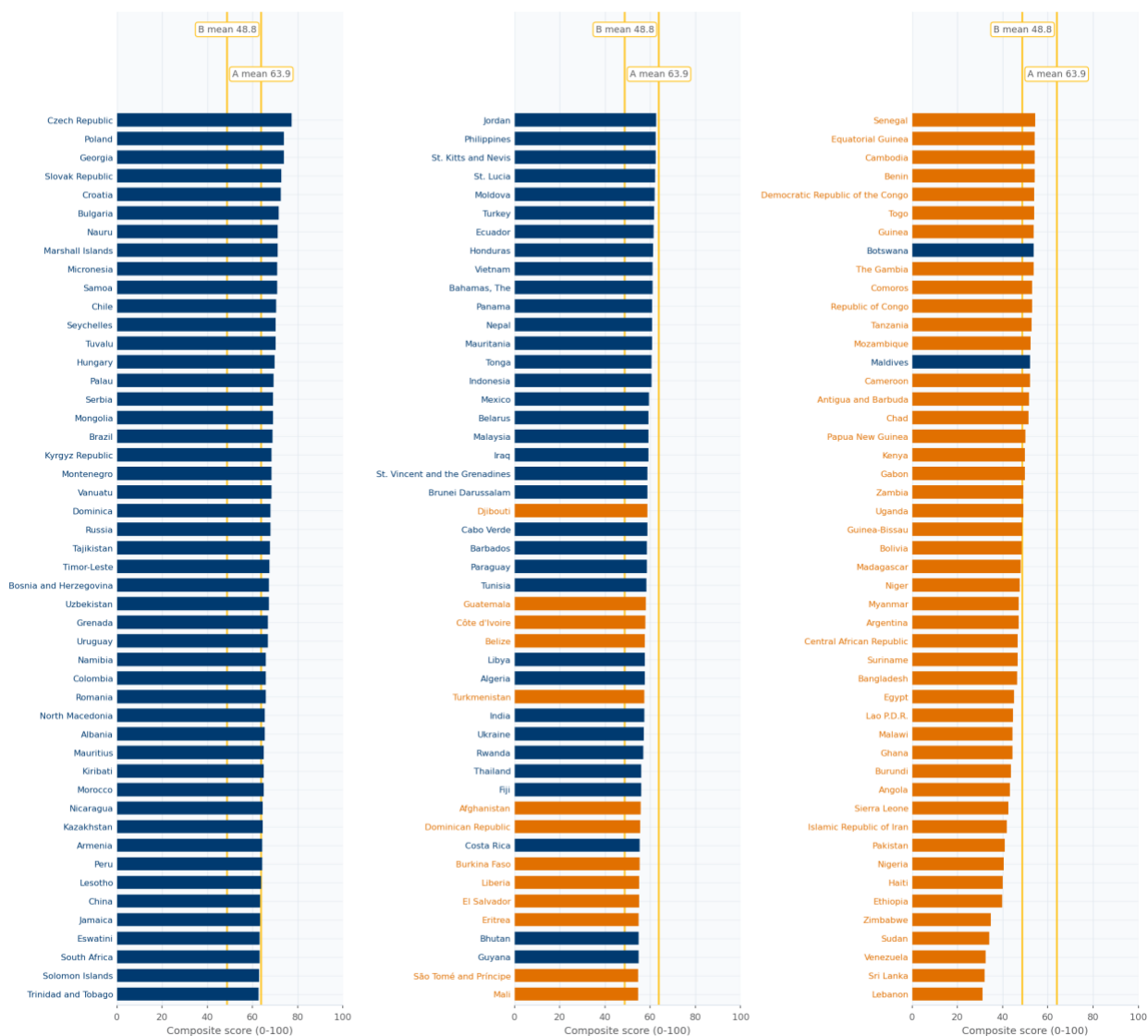
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Appendix figure

Composite fiscal sustainability scores, all 144 economies

Equal-weight composite of the eight indicators, 2022-25 vintage; colour marks the k=2 cluster



Note: Composite fiscal sustainability scores, all 144 economies, 2022-2025 vintage. Blue marks Cluster A, economies with fiscal space; orange marks Cluster B, constrained economies. Yellow lines mark the full-sample cluster means, 63.9 and 48.8. Authors' calculations.

Appendix table

Cluster membership by vintage

Vintage	Cluster A (fiscal space)	Cluster B (constrained)
2015-2019 (validation)	89	55
2022-2025 (current)	85	59

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1775 Massachusetts Ave NW
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