CHAPTER 4

FISCAL CHALLENGES IN SMALL STATES

Weathering Storms, Rebuilding Resilience
The COVID-19 pandemic and the global shocks that followed have worsened fiscal and debt positions in small states, intensifying their already substantial fiscal challenges—especially the need to manage more frequent climate change-related natural disasters. Forty percent of the 35 emerging market and developing economies (EMDEs) that are small states are at high risk of debt distress or already in it, roughly twice the share for other EMDEs. Larger fiscal deficits since the pandemic reflect increased spending to support households and firms, and weaker revenues. To improve their fiscal sustainability and resilience to future shocks, small states need to strike a balance between maintaining adequate fiscal buffers and increasing investments in human capital and climate change-resilient infrastructure. Comprehensive fiscal reforms are essential. First, small states’ revenues, which are highly volatile and dependent on sometimes unreliable sources, should be drawn from a more stable and secure tax base. Second, spending efficiency needs to be improved, especially on transfers to public enterprises, subsidies, and the public wage bill. Third, these changes should be complemented by reforms to fiscal frameworks, including better utilization of fiscal rules and sovereign wealth funds. Finally, to help these countries stay on sustainable fiscal paths, well-coordinated and targeted global policies are also needed. Policies supported by the global community can help improve fiscal policy management, provide technical assistance, address debt challenges, and bolster funding for small states to invest in climate change resilience and adaptation, and other priority areas.

Introduction

The pandemic and subsequent global shocks hit small states—those with a population of around 1.5 million or less—particularly hard (World Bank 2023a). Small states experienced some of the deepest contractions and slowest recoveries of all emerging market and developing economies (EMDEs). Governments appropriately implemented wide-ranging and often large spending measures to support firms and households. These, together with weaker revenue, led to a substantial widening of fiscal deficits, adding to already high and rising levels of public debt.

These developments are especially troubling against the backdrop of significant longstanding development and fiscal policy challenges (figure 4.1; World Bank 2023a). Since 2000, annual growth of GDP per capita in small states has on average been 2.6 percentage points slower than in other EMDEs and barely kept pace with advanced economies. Recent fiscal consolidation efforts have helped narrow deficits in some cases. Yet in many small states fiscal positions remain precarious, increasing risks to fiscal sustainability. This chapter therefore examines fiscal policy challenges in the context of developments before and since the onset of the pandemic.

Note: This chapter was prepared by Samuel Hill and Jeetendra Khadan.

Small states, located in every World Bank region of the world and with sometimes large exclusive economic zones that span vast areas of the world’s oceans, are highly heterogenous, comprising a mix of high- and middle-income countries as well as some fragile and conflict-affected situations (UNCTAD 2022; World Bank 2023a). Trade openness is much higher in small states than other EMDEs, while economic activity, including exports, is highly concentrated in a few sectors of comparative advantage. High openness and lack of diversification leave the fortunes of small state economies dependent on developments in key sectors—notably tourism and some commodity sectors—resulting in higher output volatility than in other EMDEs (Briguglio and Vella 2018).

The experience of small states during the pandemic underscores their structural vulnerabilities. Tourism, which accounts for higher shares of economic activity and export earnings than in other EMDEs, was devastated. Some small states, moreover, rely heavily on exports of a narrow range of commodities such as oil and gas, the prices of which plummeted in 2020. Many small states also rely on remittances for much of their external income, but these were severely affected by pandemic-related restrictions on international labor mobility and the decline in demand for
labor in host economies. Advanced economies and many EMDEs experienced robust recoveries as the global recovery took hold. For small states, however, the economic and fiscal consequences have endured.

Many small states are tropical islands, which are highly vulnerable to costly natural disasters, particularly storms and other weather-related events that have become more frequent with climate change (Heinen, Khadan, and Strobl 2019). As a result, small states face substantial climate change adaptation challenges that are compounded by a lack of resources to invest in resilient infrastructure (Jafino et al. 2020; UNEP 2023; World Bank forthcoming). Small states also face the risk of a sustained deterioration in productive capacity. Some of them face existential threats from rising sea levels and coastal erosion—particularly those with predominately low-lying areas such as Kiribati, Maldives, the Marshall Islands, and Tuvalu (Voudoukas et al. 2023).

Greater economic volatility brings adverse fiscal consequences, including more volatile and less predictable revenues and expenditures (Hnatkovska and Köhler-Geib 2018). Narrow tax bases and high dependence on other, less stable forms of revenue—notably various types of sovereign rents and external grants—amplify the challenge of revenue volatility. With limited fiscal buffers and opportunities to borrow, spending can be sensitive to revenue swings, and prone to booms and busts. Fiscal space can deteriorate rapidly in response to large external shocks, leading to procyclical fiscal policy.

Government spending, relative to GDP, is on average much higher in small states than in other EMDEs, irrespective of income group. Government operations in small states suffer from diseconomies of scale, which increase the costs of providing public goods and services. This is exacerbated by the higher costs of supporting dispersed populations, including small communities located far away from major centers and separated by significant expanses of sea or land. A reliance on imported goods, which are typically more expensive because of the remoteness of small states, adds to input costs. Geographic dispersion and remoteness are negatively associated with public spending efficiency (World Bank 2023b). Moreover, with limited private sector activity, governments often need to provide a wider range of services, including through state-owned enterprises (SOEs)—and at subsidized prices—putting further upward pressure on public spending (Dornan et al. 2013; Reyes-Tagle et al. 2022).

Reflecting their substantial development challenges, small states face significant additional spending pressures to meet Sustainable Development Goals (SDGs; Tiedemann et al. 2021). Their limited institutional capacity, human capital, and sometimes underutilization of technology exacerbate the challenges of fiscal management (Schwartz and Beuermann 2021). They can make the provision of government goods and services more inefficient and more expensive, and encumber the collection of taxes and other revenues. Inadequate resources can also add to challenges with fiscal planning and execution.

After the significant deterioration in the debt sustainability of small states in recent years, the need to strengthen fiscal policy is now perhaps the most important economic challenge they face. Forty percent (14) of the 35 small states are rated as being in, or at high risk of, debt distress, roughly double the proportion of other EMDEs. The strengthening of fiscal policy is particularly critical in small states given the outsized role it plays in macroeconomic stabilization and promoting external balance, given the absence in most cases of exchange rate flexibility.

Against this backdrop, the chapter addresses the following questions:

- How have fiscal positions in small states evolved since the decade preceding the COVID-19 pandemic?
- What are the main causes of the deterioration in fiscal positions?
- What are the policy priorities for improving fiscal positions?

**Contributions.** The chapter contributes to the literature in three ways.
• **Systematic review of fiscal positions.** The chapter presents the first systematic review of the fiscal positions of small states. It identifies the key trends in debt, fiscal balances, and government revenues and expenditures in small states before and after the pandemic and assesses the fiscal challenges that these countries now face.

• **Comprehensive analysis of small states.** The chapter presents an analysis of a broad sample of up to 35 EMDE small states that cuts across economic structures, and geographic and income groups, drawing out the many common economic and fiscal challenges they face. The large sample also makes possible a richer comparative analysis—including of opportunities for reform—than previous studies, complementing country-focused assessments. This is informed by extensive comparisons across groups of small states defined by structural features that impact fiscal outcomes, including export structures and size.

• **New insights from analytical frameworks.** The chapter derives new empirical insights from a range of analytical frameworks. It finds that following a natural disaster or global recession fiscal outcomes in small states have tended to deteriorate more markedly than in other EMDEs. In addition, persistent fiscal deficits have been a key driver of higher small states’ debt, while small states’ deficits have tended to narrow after increases in debt—but only slightly.

**Main findings.** The chapter presents the following key findings.

**Natural disasters and global recessions weaken small states’ fiscal and debt positions.** An event analysis shows that both types of event significantly weaken fiscal balances and increase government debt, relative to GDP, in small states. For example, three years after a large natural disaster or global recession, fiscal balances deteriorate by around 1.8 percentage points. Three years after a global recession, debt ratios increase by 3.5 percentage points and three years after a natural recession, debt ratios increase by 2.5 percentage points and three years after a natural recession, fiscal balances deteriorate by 1.8 percentage points. Three years after a global recession, fiscal balances deteriorate by 1.8 percentage points.

**FIGURE 4.1 Small states and other economies: Output growth and structural characteristics**

GDP per capita growth in small states has significantly lagged other EMDEs and barely kept pace with advanced economies, underscoring their significant development challenges. Small states’ trade openness and relatively high exposure to natural disasters leave them more vulnerable to external shocks, with associated higher output and government revenue and spending volatility. Debt sustainability in small states has substantially worsened in the aftermath of the COVID-19 pandemic.

A. GDP per capita growth, 2000-23

B. Average cost and frequency of natural disasters

C. Trade openness

D. Output volatility

E. Revenue and expenditure volatility

F. Risk of debt distress

Sources: EM-DAT (database); International Monetary Fund; WDI (database); WEO (database); World Bank.

Note: EAP = East Asia and Pacific; EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean.

A. GDP weighted average annual GDP per capita growth for groups of countries. Sample includes 34 small states, 111 other EMDEs and 37 advanced economies. Guyana is excluded.

B. Frequency is the average number of natural disasters per year, adjusted by land mass, for the period 2000-22. Unit of frequency is the number of natural disasters per year per one hundred thousand square kilometers. Average cost of natural disasters per year as percent of GDP for 24 small states and 93 other EMDEs. EAP small states include 8 economies, LAC small states include 5 economies. Natural disasters include droughts, storms, floods, extreme temperatures, earthquakes, volcanic activity, and wildfires.

C. Average ratio of trade (exports plus imports of goods and services) to GDP, 2000-22. Unit of frequency is the number of natural disasters per year per one hundred thousand square kilometers. Average cost of natural disasters per year as percent of GDP for 24 small states and 93 other EMDEs. EAP small states include 8 economies, LAC small states include 5 economies. Natural disasters include droughts, storms, floods, extreme temperatures, earthquakes, volcanic activity, and wildfires.

D. Standard deviation of annual real GDP growth in 34 small states and 115 other EMDEs for the period 2000-23.

E. Standard deviation of annual change in revenue and expenditure to GDP ratios in 35 small states and up to 117 other EMDEs for the period 2000-23.

F. Shares of small states and other EMDEs in overall debt distress or at risk of debt distress, based on the published Joint World Bank-International Monetary Fund Debt Sustainability Framework for Low-Income Countries as of March 30, 2024. Sample includes up to 19 small states and 48 other EMDEs.
Comprehensive fiscal reforms are necessary. The experience of the pandemic illustrates small states’ structural vulnerabilities to large shocks and their related development challenges. Small states’ fiscal frameworks should therefore be even more resilient than those of other EMDEs. Evidence suggests that stronger fiscal frameworks are essential to buttress government balance sheets against large shocks, and they should be complemented by reforms to promote economic growth and strengthen resilience. Reforms targeting both expenditure and revenue streams can reverse deteriorating fiscal positions while building resilience for the future. These include improving spending efficiency, enhancing domestic revenue mobilization particularly tax revenues, to reduce reliance on volatile and less sustainable revenue sources, and establishing well-designed, flexible, but enforceable rules-based fiscal frameworks with ample buffers to more effectively respond to external shocks and manage volatility. The international community has important roles to play in supporting small states in all these areas, particularly in bolstering resilience against larger and more frequent climate change-related natural disasters.

The remainder of the chapter is organized as follows. First, the impact of natural disasters and global economic shocks on fiscal positions in small states is analyzed. Second, the evolution of fiscal positions in small states is examined, both in the years leading up to the pandemic and in the subsequent period, and the drivers of the rise in debt burdens and fiscal deficits are identified. Finally, the chapter considers the policies needed to address these challenges, drawing on successful experiences in small states and other EMDEs.

Fiscal vulnerability to shocks

Small states are especially vulnerable to natural disasters and global economic shocks. Although exposure varies, many small states are among the most disaster-prone countries in the world. Climate change is exacerbating this vulnerability, leading to more frequent and intense disasters that result in large economic losses (Guo and
The high degrees of openness and narrow export bases of small states also make them vulnerable to global economic developments such as recessions, commodity price changes, and financial market fluctuations (Acevedo, Cebotari, and Turner-Jones 2013).\footnote{In contrast, over the past decade or so, small states have typically been less affected by other events such as domestic financial crises, armed conflict, and wars.}

**Natural disasters.** Natural disasters adversely affect fiscal balances and debt ratios by reducing economic growth and government revenues, and increasing government spending (Cabezon et al. 2019; Lee, Zhang, and Nguyen 2018; Melecky and Raddatz 2011). For example, it has been estimated that following an average hurricane shock, tax revenues in a sample of Caribbean small states dropped by up to 5.3 percent in the short-term because of reduced economic activity, especially in private consumption (Auffret 2003; Mohan and Strobl 2021). Revenues from transactions in goods and services and international trade are especially vulnerable to tropical storms—one of the most damaging kinds of shock faced by small island states (Mohan and Strobl 2021). After a disaster, higher government spending is needed to finance emergency relief efforts and reconstruction (Cabezon et al. 2019; Lis and Nickel 2009). These increases in government spending are sustained for at least two years after the shock (Ouattara and Strobl 2013). Tropical storms have also increased government debt in some small states, particularly to external creditors (Cavallo et al. 2024; Mohan and Strobl 2020).

**Global recessions.** Global recessions can significantly worsen countries’ fiscal positions, with debt ratios rising for up to five years after the start of a recession (Kose et al. 2021). During global recessions, pressure on real household incomes in advanced economies can lead to cuts in spending on international travel, on which many small states depend heavily. For example, the 2009 global recession significantly reduced government revenues in tourism-reliant Caribbean small states, contributing to sharp increases in their fiscal deficits (Mercer-Blackman and Melgarejo 2013). Global recessions are often associated with job losses or reduced wages in advanced economies, which can also decrease remittance flows to small states that rely on them, leading to reductions in consumer spending and consumption-based tax revenues. In addition, higher social spending is often required to support vulnerable groups during global recessions, exacerbating already strained public finances in small states.

**Natural disasters and global recessions weaken small states’ fiscal and debt positions.** An event analysis of global recessions and natural disasters since 2000 shows that both types of event significantly weaken fiscal balances and increase government debt, relative to GDP, in small states (figure 4.2).\footnote{Alternative methods for the event analysis including regression analysis were explored but not used owing to data limitations.} For example, on average, large natural disasters are associated with a 0.7 percentage point deterioration in the fiscal balance and a 2.4 percentage points increase in the debt ratio in the year of the shock, with the deterioration of both measures continuing in the subsequent two years. Fiscal balances initially deteriorate even more in the year of a global recession, around 3 percentage points, on average, but the impact is less persistent than in the case of natural disasters. In the year of a global recession debt ratios rise by around 8 percentage points but then begin to decline. Comparing the persistence of shocks, three years after natural disasters, fiscal balances deteriorate by 1.8 percentage points, similar to a global recession. However, three years after a natural disaster, debt ratios increase by 6 percentage points, more than the 3.5 percentage points increase following a global recession. Thus, natural disasters appear to have a more persistent adverse impact on small states’ fiscal positions. Finally, both natural disasters and global recessions are found to have larger adverse impacts on small states than other EMDEs. In particular, on average, in the third year after such shocks fiscal balances had weakened and debt-to-GDP ratios had increased by more in small states than other EMDEs.
Average fiscal positions in small states have deteriorated markedly following natural disasters and global recessions, with fiscal balances weakening and debt increasing relative to GDP. Three years after such shocks, on average, fiscal balances have weakened by more and debt increased further in small states than in other EMDEs.

The pandemic shock hit small states harder than other EMDEs, largely because of prolonged disruptions to global tourism (World Bank 2023a). Collectively small states contracted by about 11 percent in 2020, much more than other EMDEs (figure 4.3). Moreover, although they constitute only one quarter of EMDEs in number, in 2020 small states accounted for more than half of the largest economic contractions across all EMDEs. Contractions were particularly large in tourism-dependent economies, including The Bahamas, Fiji, and Maldives. Recoveries from the pandemic have also been slower in small states, particularly in the East Asia and Pacific (EAP) region, where reopening after the pandemic was delayed and the revival of tourism was slow. In some small states, output continued to contract through 2022. By 2023 average output across small states was around 5 percent higher than before the pandemic, in 2019, far below the 15 percent increase in other EMDEs.

With the tailwinds from the pandemic recovery fading, growth across small states is projected to slow this year and next. The pandemic has left substantial economic scarring on small states, with GDP projected to be around 7 percent below pre-pandemic trends in 2024 and with no expectation that this loss will be recovered in the next two years. Moreover, medium-term growth prospects are declining in some small states as underlying growth drivers, notably investment, weaken, in the face of more frequent and severe natural disasters, and climate change (World Bank 2024a).

Evolution of fiscal positions in small states

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Conceptual framework

The main drivers of government debt, relative to GDP, can be identified by applying an accounting decomposition (World Bank 2023c). Specifically, the change in the debt-to-GDP ratio in any period can be separated into contributions from the primary fiscal balance—the difference between revenue and non-interest expenditures—interest costs on debt, output growth, and other factors including inflation.
Such a decomposition is used to analyze the drivers of the average debt-to-GDP ratio in small states for the period 2011-23, and then separately for the pre-pandemic period 2011-19 and the period 2019-23, to examine the initial impact of the pandemic (annex 4.1). A representative sample of 32 small states, determined by data availability, are included in the exercise. To examine the possible path and drivers of debt in the next few years, a decomposition is also applied for the period 2023-26, using forecasts from the International Monetary Fund’s (IMF’s) April 2024 World Economic Outlook.

Evolution of debt

Government debt in small states averaged 57 percent of GDP between 2011 and 2023, 10 percentage points higher than in other EMDEs (figure 4.4). In small states, as in other EMDEs, average government debt has risen markedly since 2011. It was rising even before the pandemic, but there was a sharp acceleration when the pandemic hit (Sirimaneetham 2022). Although the debt-to-GDP ratio has moderated in the last few years, it remains higher than in the pre-pandemic period. The debt build-up reflects persistent fiscal deficits as well as the growth collapse caused by the pandemic.

Widespread rise in government debt

Between 2011 and 2023, average government debt in small states increased by about 11 percentage points of GDP. Although this increase was smaller than in other EMDEs, the average debt-to-GDP ratio in small states in 2023, at 61 percent, remained higher than in other EMDEs. The debt build-up was also widespread, occurring in about 60 percent of small states. Where it fell, this was often the result of surging revenues from sovereign rents, grants, or other non-tax revenues; in other cases, it reflected debt restructuring linked to IMF-supported policy programs. Reflecting the widespread debt build-up, the proportion of small states saddled with high debt rose from around one-third in 2011 to one-half in 2023; throughout the period it was higher than for other EMDEs.

About two-thirds of the increase in debt between 2011 and 2023 occurred before the pandemic. In 2011-19, government debt rose relative to GDP because of lingering adverse effects of the Global Financial Crisis and a variety of country-specific factors such as natural disasters, increased borrowing to fund large projects, and sharp falls in commodity prices for some commodity exporters. Debt rose markedly in Samoa and Vanuatu following large, damaging storms in 2012 and 2015 respectively. In Eswatini, a drought in 2015 added to fiscal challenges. Debt also rose significantly among metal and oil exporters, including Suriname, around 2015, when falling gold and oil prices curtailed revenues.

FIGURE 4.3 Output since the COVID-19 pandemic in small states and other EMDEs

The pandemic disproportionately impacted small states, with an average economic contraction of about 11 percent in 2020, much greater than in other EMDEs. Tourism-dependent small states were hit particularly hard. Recoveries have also been slower in small states: their output in 2023 was only 5 percent higher than in 2019, far below the 15 percent increase in other EMDEs. Moreover, output in small states is set to continue on a lower path than expected before the pandemic.
FIGURE 4.4 Government debt in small states and other EMDEs

Following a gradual rise since 2011, the average government debt-to-GDP ratio in small states increased sharply at the onset of the COVID-19 pandemic. While it has since declined, it remains higher than before the pandemic and in other EMDEs. Increases in debt among small states have been widespread. Small states rely more heavily on official borrowing than other EMDEs and have lower debt-carrying capacity, with debt risk ratings triggered at lower average debt levels.

A. Government debt

B. Shares of small states and other EMDEs with high public debt

C. Composition of external public debt by creditor

D. Debt level by debt sustainability rating

Sources: International Debt Statistics (GDDS database); International Monetary Fund; WEO (database); World Bank.

Note: EMDEs = emerging market and developing economies.

A. Average government debt to GDP ratio for 32 small states and 111 other EMDEs. Whiskers indicate interquartile range.

B. Bars show the percentage of small states and other EMDEs with debt to GDP ratios of at least 60 percent for 32 small states and 111 other EMDEs.

C. Average share of public and publicly guaranteed external debt by type of creditor for 22 small states and 100 other EMDEs. D. Average debt as a percent of GDP in 2023 for countries classified at different levels of debt sustainability rating, based on the published Joint World Bank-International Monetary Fund Debt Sustainability Framework for Low-Income Countries as of March 30, 2024. Sample includes up to 19 small states and 48 other EMDEs.

At the onset of the pandemic-induced recession, in 2020, government debt in the average small state jumped by 15 percentage points of GDP, much more than in other EMDEs, before moderating by around 12 percentage points by 2023. In 2020, non-grant-reliant small states experienced a particularly large increase in debt. Although the pandemic was the main factor driving debt higher, natural disasters also contributed—including a volcanic eruption in St. Vincent and the Grenadines in 2021.

Deficit-driven government debt buildup

The sharp increase in the average government debt-to-GDP ratio in small states between 2011 and 2023 reflected rising primary fiscal deficits and interest costs, which together outweighed the debt-reducing effects of real growth and other factors (figures 4.5 and 4.6). In countries where the debt ratio increased, the contribution from fiscal deficits varied, but in most cases it was greater than one-half. However, debt drivers varied somewhat before and following the pandemic. From 2011 to 2019, solid growth was sufficient to offset primary deficits. In contrast, between 2019 and 2023, widening fiscal deficits overwhelmed the debt-reducing effects of growth, which shrank on account of the pandemic induced contractions in output and slow recoveries.

Between 2023 and 2026, average government debt in small states is projected to moderate by around 2 percentage points to 58 percent of GDP, supported by economic growth that is expected to partially offset persistent primary deficits. In most countries, projected growth over this period exceeds the pre-pandemic average, reflecting tailwinds from the pandemic recovery. If growth falls short of expectations, however, there is a risk of weaker fiscal outcomes. Even if the projections materialize, average debt in small states, relative to GDP, would remain a little above its pre-pandemic level.

Reliance on official creditors

Governments in small states have limited access to borrowing from domestic or foreign private sources, so they often rely heavily on official sources (World Bank 2023a, 2023d). Reflecting their considerable development challenges, 14 of the 35 small states are eligible for concessional financing through the World Bank’s International Development Association (IDA), with an additional seven classified as IDA-blend countries. Reliance on official borrowing reflects generally low creditworthiness and underdeveloped domestic financial systems—particularly in the smallest and poorest economies and in fragile and conflict-affected small states. Government borrowing from private sources is often reliant on local commercial banks. Several factors influence
the ability of governments to borrow from private creditors, including a country’s macroeconomic stability and a government’s record in meeting its financial obligations (Reinhart, Rogoff, and Savastano 2003). The debt-carrying capacity of small states tends to be smaller than that of other EMDEs, partly reflecting structural constraints on economic growth and susceptibility to external shocks (World Bank 2023b). This is underscored by the fact that higher risk ratings from debt sustainability analyses are on average triggered at lower debt levels in small states than in other EMDEs.

On average, in 2022, small states owed around 90 percent of their external public debt to official creditors, more than they did on the eve of the pandemic—and well above the 75 percent average share for other EMDEs. A little less than half of small states’ external debt is owed to multilateral creditors. The remaining approximately 40 percent is owed to bilateral creditors including a diverse mix of Paris and non-Paris Club members, the latter including notably China. In some small states, loans owed to Chinese entities account for a substantial share of total external debt (Horn, Reinhart, and Trebesch 2021).³ The large share of official borrowing reduces rollover risks and enables access to concessional terms in many cases. However, limited access to private borrowing narrows the options for small states to meet their significant financing needs.

### Evolution of primary deficits

#### Persistent primary deficits

In small states primary fiscal deficits have persisted since before the pandemic. Between 2011 and 2023, there was an average primary deficit in small states of 1.4 percent of GDP, with about 70 percent of small states having primary deficits on average. Small states reliant on commodity exports had, on average, a primary deficit of 4 percent of GDP compared with an average primary surplus of 0.5 percent of GDP in their commodity-importing peers. Commodity exporters’ fiscal and external positions were severely affected by commodity-price shocks during this period (Al-Sadiq, Bejar, and Ötker-Robe 2021). The fiscal positions of small states also differed among regions, with small states in EAP and Latin America and the Caribbean (LAC) having deficits smaller than other regions. Micro states—which typically have an outsized reliance on external grants and other non-tax revenue—on average reported primary surpluses.

The pandemic-induced recession dealt a severe blow to fiscal balances in small states (figure 4.7).

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³According to estimates by Horn, Reinhart, and Trebesch (2021), external debt owed to China as a share of GDP exceeded 25 percent in three small states: Djibouti, Maldives, and Tonga.
Before the pandemic, from 2011 to 2019, small states’ primary deficits averaged 0.6 percent of GDP. In contrast, between 2020 and 2023, they averaged 3.3 percent of GDP, an increase of more than 2 percentage points. Of this increase, about three-quarters is attributed to higher spending and the remainder to lower revenue. Even though growth rebounded in 2021-23, small states continued to post larger primary deficits than other EMDEs. In 2023, small states’ primary deficits averaged 2.1 percent of GDP, compared with less than 1 percent of GDP in other EMDEs. Moreover, around three-quarters of small states reported weaker primary balance ratios in 2020-23 than their 5-year pre-pandemic average, a greater share than other EMDEs.

### Revenue levels

Small states’ government revenues-to-GDP ratios are on average markedly higher than other EMDEs. However, in small states, revenue ratios have yet to recover to pre-pandemic levels. Revenue ratios averaged 36 percent of GDP, between 2011 and 2019, with revenues particularly buoyant in micro states reflecting rising grants and non-tax revenues. The average revenue ratio declined from 2020 to 2023, to a level of almost one percentage point below their pre-pandemic levels. In contrast, revenues in other EMDEs had fully recovered by 2022. Among small states, between 2011 and 2023, commodity exporters had lower revenues than their commodity-importing peers. Revenues in the EAP region and in micro states were more than double those in other small states, largely reflecting their reliance on grants and non-tax revenue. Overall, small states exhibit significant variation in revenue ratios, and unlike other EMDEs, these do not always correlate closely with income levels.

### Revenue composition and volatility

Small states rely more on non-tax revenues than other EMDEs. Small states, especially micro states, derive significant revenues from a variety of sometimes unusual non-tax revenue sources such as fishing licenses and citizenship-by-investment programs. Excluding grants, non-tax revenue
averaged around 34 percent of total revenues in small states during 2011-22, 10 percentage points higher than in other EMDEs (figure 4.8). However, there is significant variation in the level of such revenues across small states, being generally higher in EAP, especially in the smallest Pacific Island economies, and commodity importers. In some cases, large marine territories and small populations enable significant revenue to be derived from sovereign rents, notably selling fishing access rights in their exclusive economic zones, shipping licenses, and economic citizenship programs (Cover-Kus 2019).

Grants, from bilateral and multilateral donors, are markedly higher in Pacific Island small states—particularly micro states—than in other EMDEs, and they provided timely fiscal support during the pandemic (World Bank 2023d). On average, grants amounted to almost 7 percent of GDP in small states between 2011 and 2022, compared with 2 percent of GDP in other EMDEs. Grants accounted for 17 percent of total revenues in small states during 2011-22—about twice the share in other EMDEs. In EAP small states, grants amounted to 14 percent of GDP in this period, compared with just 1.6 percent of GDP in LAC and 3.3 percent of GDP in other small states. In some cases, sustained large grants reflect ongoing bilateral assistance arrangements. For example, under the Compacts of Free Association, the United States provides financial assistance to the Marshall Islands, the Federated States of Micronesia, and Palau. The terms are renegotiated intermittently with a new agreement reached in 2023 on extending economic assistance for 20 years, thereby avoiding a fiscal cliff in the recipient countries (Lum 2023). Grants have also featured more prominently in some small states’ revenues in the aftermath of natural disasters.

From 2011 through 2022, tax revenues in small states averaged 20 percent of GDP, 5 percentage points higher than in other EMDEs. Although direct and indirect taxes accounted for similar shares of tax revenues, on average, in small states as in other EMDEs, there were notable differences in the shares of specific taxes (figure 4.9). Most notably, trade taxes contributed almost one-quarter of tax revenues in small states, more than double the 11 percent share in other EMDEs. Small states’ outsized trade revenue share stems from their high economic openness and the relative ease, for island states, of collecting taxes on imported goods (Borg 2006). Additionally, taxes on consumption of goods and services accounted for a smaller proportion of revenue in small states—40 percent—than in other EMDEs—52 percent. However, the contributions of income and property taxes in small states were similar to those in other EMDEs—about 35 and 1.5 percent, on average, respectively.

Notable differences in tax composition also exist among small states. In LAC small states, only about one-quarter of tax revenues come from direct taxes, less than in other small states, particularly those in EAP, primarily because of deficiencies in personal income tax collection (Acosta-Ormaechea, Pienknagura, and Pizzinelli 2022). In tourism-reliant small states, consumption taxes are far more important than in commodity-exporting small states. Finally, in micro states, where trade openness is greater than in other small states, trade taxes account for an outsized share of tax revenue.
Government revenue in small states and other EMDEs

Although small states have higher average ratios of total government revenue and tax revenue to GDP than other EMDEs, they are more reliant on non-tax revenues. Their revenue sources vary widely, including sovereign rents such as sales of fishing access rights, shipping licenses, and economic citizenship programs. Revenues are particularly high in EAP, and commodity-importing small states, and in micro states. Small states revenues are also more volatile than in other EMDEs.

**FIGURE 4.8**

- **A. Government revenue**
  - Percent of GDP
  - Small states
  - EMDEs excl. small states
  - 2011, 2019, 2020, 2023

- **B. Composition of government revenue, 2011-22**
  - Percent of GDP
  - Small states
  - EMDEs excl. small states

- **C. Government revenue, by region, 2011-23**
  - Percent of GDP
  - EAP small states
  - LAC small states
  - Other small states

- **D. Government revenue, by trade composition, 2011-23**
  - Percent of GDP
  - Small states: Commodity exporters
  - Small states: Commodity importers
  - Small states: Tourism reliant

- **E. Government revenue, by population size, 2011-23**
  - Percent of GDP
  - Micro states
  - Other small states

- **F. Volatility of government revenue, 2000-23**
  - Standard deviation

Sources: GFS (database); WEO (database); World Bank.

Note: EAP = East Asia and Pacific; EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean.

A. Panel shows average revenue to GDP ratios in 32 small states and 110 other EMDEs.
B. Bars show the average revenue to GDP ratios for the period 2011-22. Small states include 34 economies, and EMDEs excluding small states include 97 economies.
C.-E. Bars show the average revenue to GDP ratios for the period 2011-23.
C. EAP small states include 13 economies, LAC small states include 11 economies, and other small states include 11 economies.
D. Small states commodity exporters include 13 economies, small states commodity importers include 22 economies, and tourism-reliant small states include 22 economies.
E. Micro states have a population of less than 200,000. Micro states include 14 economies, and other small states include 21 economies.
F. Standard deviation of annual change in revenue to GDP ratios in 36 small states and 113 other EMDEs for the period 2000-23. Small states commodity exporters include 13 economies, and small states commodity importers include 22 economies.

Government revenues in small states tend to be relatively volatile because of the vulnerability of these economies to external shocks, including natural disasters and movements in commodity prices (Reyes-Tagle, Silvani, and Ospina 2022). Revenue from income taxes, which accounts for more than one-third of tax revenues, are particularly sensitive to shifts in output triggered by such shocks. Furthermore, the unpredictability of such revenue sources as grants and sovereign rents tends to amplify volatility, contributing to procyclicality and increasing risks to fiscal sustainability (Talvi and Vegh 2005). Both commodity-importing and commodity-exporting small states experience higher revenue volatility than other EMDEs.

**Evolution of government expenditure**

**Spending levels**

Between 2011 and 2023, government expenditures in small states averaged 40 percent of GDP, 13 percentage points of GDP higher than in other EMDEs (figure 4.10). In small states, they grew by 3 percentage points of GDP, on average, from 2011 to 2019, rising in more than half of them, especially in micro states, where expenditures on wages and goods and services both increased significantly. In contrast, government expenditure in other EMDEs was relatively stable between 2011 and 2019. There were significant differences in the level of spending among small states, with primary expenditures being relatively high in the EAP region (partly because of the prevalence of micro states), commodity importers, and micro states.

Small states’ total government spending increased to 45 percent of GDP in 2020, its highest level during 2011-23, 4 percentage points higher than in 2019, and 16 percentage points higher than in other EMDEs. This reflected both the contraction in GDP and continued growth in spending including higher outlays on healthcare and efforts to counter the economic effects of the pandemic (figure 4.11; Fordelone, Tortora, and Xia 2022). By 2022, expenditures in small states had returned to pre-pandemic levels, but remained significantly higher than in other EMDEs. In 2023, small states’ expenditure averaged 41 percent of GDP, compared with 28 percent of GDP in other EMDEs.
Spending composition and volatility

In small states, both capital and primary current expenditures have been relatively high. Primary expenditures in small states averaged 38 percent of GDP between 2011 and 2023—12 percentage points higher than in other EMDEs. Primary spending was notably higher for small states in the EAP region—partly because of the prevalence of micro states—relative to other small states during 2011-23. Small states’ interest payments on government debt were on a par with those in other EMDEs, averaging almost 2 percent of GDP, but with significant variation among small states, ranging from negligible amounts for some countries to as high as 4.2 percent of GDP for Suriname—nearly one-fifth of its government’s revenue. Capital expenditure in small states averaged 7 percent of GDP during 2011-22, higher than in other EMDEs.

Primary current expenditure in small states is mainly driven by the public wage bill and expenditures on goods and services. During 2011-22, together these were equivalent to 22 percent of GDP, 10 percentage points higher than in other EMDEs. Wage bills were particularly large, relative to GDP, in small states—some 5 percentage points of GDP higher than in other EMDEs—partly reflecting diseconomies of scale in the provision of public goods and services (Cas and Ota 2008). However, wage bills varied significantly among small states: in EAP, they were nearly double those in other regions; commodity importers had wage bills 6 percentage points higher than commodity exporters; and micro states had wage bills 4 percentage points higher than other small states. There are also expenditure variations across income groups in small states. For example, high-income small states have lower wage bills than other small states and other EMDEs, while lower-middle-income small states allocate less budget resources to investment, in favor of goods and services, than other small states and their other EMDE counterparts.

Expenditure volatility is higher in small states than in other EMDEs, and slightly higher for commodity importers within small states.

FIGURE 4.9 Tax revenue composition in small states and other EMDEs

Compared with other EMDEs, in small states trade taxes account for a higher share of tax revenues and consumption taxes a lower share. However, there is substantial variation in the composition of tax revenue among small states, with income taxes accounting for a higher share of revenue in EAP, while in other regions and in tourism-dependent small states consumption taxes are more important.

Fiscal policy options in small states

Increased fiscal deficits and higher public debt in the aftermath of the pandemic, in a context of continued exposure to large external shocks including from climate change, present a significant challenge to fiscal sustainability in small states (Cevik and Nanda 2020; Clayton and Rosenblatt 2024; Khadan 2019; Khadan and Deonarine 2019). This is especially so given small states’ high reliance on external borrowing and stocks of
foreign currency denominated debt. Fresh econometric analysis underscores these challenges (annex 4.2). An investigation of the fiscal reaction function in small states—which captures how the primary fiscal balance reacts to changes in debt—finds that fiscal policy takes corrective actions in response to rising debt ratios, but only in a muted manner (table A4.2.2). The substantial fiscal impact of such external shocks as global recessions and natural disasters underscores the need for reforms of both revenue and expenditure policies, as appropriate for different countries, supported by rules-based fiscal frameworks aimed at bolstering resilience.

An important reason small states face significant revenue challenges is their generally narrow tax bases—reflecting high economic concentration and, in some cases, reliance on a limited range of taxes—and weak tax administration. Although non-tax sources can generate substantial revenues that may provide a buffer against shocks, these revenues can be highly volatile and subject to risks of being unsustainable—including risks from climate change. Pacific Island economies, for example, face the threat of substantial tuna-catch revenue losses in the coming decades as tuna migration patterns are impacted by rising greenhouse gas emissions (Bell et al. 2021). Economic citizenship programs may experience sudden stops reflecting changes in immigration policies in other countries, and they can lead to reputational risks (Gold and Myrvoda 2017). In many small states international trade taxes, including import tariffs, have traditionally been an important source of revenue because they are relatively easy to enforce at the border. However, as small states lower import duties, their revenues could fall further (Khadan and Hosein 2015). Finally, some small states have adopted aggressive tax regimes designed to attract foreign financial flows, featuring zero or low corporate tax rates or other arrangements that severely limit the tax obligations of foreign entities. These can undermine revenue mobilization. They can also create compliance and transparency risks, and undermine anti-money laundering and combating terrorism financing efforts (UNCTAD 2024). Additionally, these types of low-tax regimes are at risk from the global minimum tax initiative, which aims to
create a fairer international tax system and curb tax avoidance.

Small states’ spending requirements are substantially higher than those of other EMDEs partly because of diseconomies of scale in the provision of goods and services and greater vulnerability to natural disasters (Horscroft 2014). Substantial additional spending will be needed to meet the SDGs in small states. Tiedemann et al. (2021), for example, examine spending needs to meet SDGs across five key physical infrastructure and social sectors in a representative sample of small states, taking account of their greater exposure to natural disasters and higher costs of delivering goods and services. Estimated median additional annual spending for small states between 2019 and 2030 is 6.7 percent of 2030 GDP, with higher spending than this needed in poorer countries.

Small states today are characterized by increasingly unsustainable public debt levels, high fiscal volatility, reliance on less secure revenue sources, and high public spending. Restoring sustainability and stability will require action to achieve several policy priorities. These include domestic resource mobilization with an emphasis on increasing the tax share of revenue; increasing spending efficiency; and strengthening fiscal frameworks to boost resilience. Particularly for poorer small states, these efforts need to be complemented by continued external financial support, as well as fiscal capacity building. Such support should focus on the most critical development challenges, including strengthening education, healthcare, and social protection systems, and tackling the substantial threats posed by climate change.

**Domestic revenue mobilization**

Although small states benefit from higher average government revenue, relative to GDP, than other EMDEs, there is scope to mobilize greater revenue, particularly from taxes, which would lessen reliance on other revenue sources. Estimates for a sample of small states indicate shortcomings in tax effort—the difference between actual and potential tax revenue, estimated on the basis of economic structural features (McNabb, Danquah, and Tagem 2021). As in other EMDEs, average tax effort in small states lags advanced economies highlighting the scope to boost revenue (figure 4.12). Moreover, there is substantial variation across small states, with tax effort lower among commodity exporters compared with their peers. Increasing tax revenue in small states requires broadening tax bases; in some cases, introducing taxes that are widely used in other EMDEs; strengthening tax collection, including by improving the efficiency of tax administration and modernizing the technology used; and considering raising tax rates where appropriate.

**FIGURE 4.11 Composition of government expenditure in small states and other EMDEs**

The share of capital expenditure in total government expenditures was slightly higher in small states than in other EMDEs during 2011-22. While varying greatly, small states’ interest payments were on average comparable to those of other EMDEs, and, as in other EMDEs, they increased markedly between 2019 and 2023. Small states spend more on health and education, as well as public investment, than other EMDEs.

A. Current and capital expenditure, 2011-22

B. Net interest payments

C. Composition of expenditure, 2011-21

D. Expenditure on healthcare and education by region, 2011-21

Sources: GFS (database); International Monetary Fund; WDI (database); WEO (database); WHO (database); World Bank.

Note: EAP = East Asia and Pacific; EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean.

A. Panel shows the share of major components of total spending for 19 small states and 81 other EMDEs for the period 2011-22.

B. Average net interest payments as a percent of GDP for 32 small states and 110 other EMDEs.

C. Average expenditures on health and education as a percent of GDP for the period 2011-22.

D. Expenditure on health and education by region, 2011-21.

EMDEs excl. small states
FIGURE 4.12 Domestic revenue mobilization in small states and other EMDEs

Small states rely much more on grants and other non-tax revenues than other EMDEs but there is scope to mobilize additional tax revenues, particularly in commodity exporters, where tax effort lags behind that of peers. Additional tax revenues could be generated by better harnessing technology to support tax collection and, in some cases, by increasing value-added tax rates.

A. Composition of total revenues, 2011-22

B. Tax effort

C. Share of electronic tax filing, 2021

D. VAT rates, 2024

Sources: Ernst and Young (database); GFS (database); International Monetary Fund; ISORA (database); McNabb, Danquah, and Tagem (2021); PWC (database); World Bank.

Note: ATG = Antigua and Barbuda; BHR = Bahrain; BHS = The Bahamas; BHS = The Bahamas; BRB = Barbados; CPV = Cabo Verde; EMDEs = emerging market and developing economies; FJI = Fiji; GRD = Grenada; GUY = Guyana; KIR = Kiribati; LCA = St. Lucia; MDV = Maldives; MNE = Montenegro; MUS = Mauritius; PLW = Palau; SYC = Seychelles; STP = São Tomé and Príncipe; SUR = Suriname; SWZ = Eswatini; VCT = St. Vincent and the Grenadines; VAT = Value-added tax; VUT = Vanuatu.

A. Panel shows average composition of total revenue by major component in 34 small states and 97 other EMDEs for the period 2011-22. B. Tax effort reflects the difference between actual and potential tax revenue. Tax potential estimates are latest available for each country based on the true random effects method reported in McNabb, Danquah, and Tagem (2021). Sample includes 14 small states, 8 small states commodity exporters, 6 small states commodity importers, 35 advanced economies, and 98 EMDEs excluding small states. C. Panel shows share of tax returns filed electronically, for different tax types. Based on a sample of up to 18 small states and 57 other EMDEs for 2021. D. Panel shows standard VAT rates as of March 2024. EMDEs excluding small states include 81 economies.

Tax policy. Following the trend in other EMDEs, a growing number of small states have introduced value-added taxes (VATs), including recently Palau, São Tomé and Príncipe, and Suriname. VATs offer several advantages over alternatives. They are generally more efficient than taxes on income and international trade. When they are appropriately designed, implemented, and enforced, they can generate significant revenue. Although such broad-based consumption taxes can be regressive, with adverse implications for equity, evidence suggests that this need not be the case, particularly in developing countries, where there is a higher propensity among affluent households to consume goods and services in the formal sector where the VAT is applied (Bachas, Gadenne, and Jensen 2023). Moreover, any regressive effect of VATs can be offset through transfers to poorer households. In small states currently lacking VATs—including Brunei, Marshall Islands and Timor-Leste, where tax revenues are amongst the lowest of all small states—they could be introduced to bolster revenue. Similarly, income taxes—a cornerstone of revenue in most countries and which are typically progressive—could be introduced in The Bahamas and Vanuatu (IMF 2023a, IMF 2024).

VATs and other cornerstone taxes can be exploited more effectively in small states. As a result of tax design and enforcement issues, the average Pacific Island economy collects only about half of its potential VAT revenue (Sy et al. 2022). In addition, VAT rates in small states average 14 percent, around 2 percentage points lower than the average in other EMDEs. This suggests that there is scope to lift VAT rates to increase revenue, as done in Fiji in 2023 when the VAT rate was increased from 9 to 15 percent, while maintaining exemptions for essential items. Small states where VAT rates are well below peers and other EMDEs include The Bahamas and Maldives. Income taxes could also be better utilized in small states to boost revenue and support distribution objectives. Although high corporate income tax rates can hinder competitiveness and discourage investment, there is scope to increase these rates where they are particularly low.

Widespread exemptions and zero rating of certain goods and services give rise to significant foregone revenue, distortions, and complications for tax collection, for example in some LAC small states (Schlotterbeck 2017). Although such exemptions are often intended to support development goals, including progressive redistribution and investment promotion, they are often arbitrary in many respects, opaque and non-transparent—and less effective than other policy options. They need to be carefully reviewed and, unless justified, removed, and governance frameworks should be
strengthened to make it more difficult to grant exemptions in the first place (World Bank 2023e).

**Tax administration.** Strong tax administrations are essential for enforcement and revenue collection. In small states, tax administrations often suffer from organizational inefficiencies, out-of-date systems, and low capacity (Kidd 2010; Schlotterbeck 2017). They are also often obligated to administer a variety of government fees and service charges, which can distract from core tax enforcement and collection functions. Tax administrations in small states also typically lack scale—partially in micro states, where in several instances there are fewer than 100 staff working in tax and customs administration. Semi-autonomous and integrated organizational approaches that minimize administrative duplication can help maximize efficiency (Junquera-Varela et al. 2019). While a dedicated office for large taxpayers may be infeasible, particularly in micro states, it is essential that adequate resources are mobilized to ensure compliance by large taxpayers, including foreign-owned businesses with ready access to professional advice on how to minimize their tax obligations. More fundamentally, successful tax administration requires a broad consensus that the tax system is fair (Martínez-Vazquez, Sanz-Arcega, and Tránchez-Martín 2023).

A wide variety of digital technologies have been used by tax administrations around the world to improve taxpayer experiences, enhance internal tax and customs operations, strengthen tax compliance, reduce costs, and bolster revenue collection (Junquera-Varela et al. 2022; Nose and Mengistu 2023; Oyebola and Tourek 2023). Digital technologies can also be a vital aid with audits and detecting fraud. Tax administrations in small states have continued to implement new technologies, but in many cases a lack of investment in systems, and broader institutional and digital connectivity constraints, prevent countries from taking full advantage of them (Reyes-Tagle, Silvani, and Ospina 2022). On average, rates of electronic filing of tax returns for income tax and VAT remain markedly lower than in other EMDEs, but they vary significantly across small states, highlighting the opportunity to expand electronic filing in many of them. In some small states virtually all tax returns are filed electronically, which has helped boost revenues, including in Barbados and Mauritius (IMF 2022a, 2023b). In others—including Antigua and Barbuda and Belize—the rate is much lower. Experience shows that integrating digital technologies into tax administration increases tax revenue and reduces the tax compliance gap. For instance, a 50 percent increase in electronic filing adoption can lift tax revenues by 1.6 percent of GDP, while the introduction of mandatory electronic filing can boost revenues by as much as 5 percent of GDP (Nose and Mengistu 2023).

**Structural policies.** In EMDEs, pervasive informality hinders tax collection (Ohnsorge and Yu 2022). There tends to be less informality in small states than in other EMDEs, reflecting the greater role of the public sector, including as an employer. Even so, measures to reduce informality in small states would support tax collection and yield other benefits (Khadan and Ruprah 2022).

**Expenditure efficiency**

The public sector in small states tends to be larger than it is in other EMDEs, in part because the government’s fixed costs—for administration and infrastructure, for example—represent a larger proportion of the overall economy than is the norm in larger economies. As a result, higher public spending levels in small states can be partially justified by diseconomies of scale (Horscroft 2014). Yet they also reflect expenditure inefficiencies that can weigh on fiscal sustainability (figure 4.13; Afonso and Alves 2023).

Spending efficiency scores, which measure the distance between observed input-output combinations and an estimated efficiency frontier, indicate that there is room for small states to improve spending efficiency in the provision of education and healthcare, and in investment. Enhancing institutional quality is one way of boosting expenditure efficiency. Thus in growth-enhancing public investment projects, inefficiencies may arise from a lack of good governance frameworks, inadequate project appraisals, weak implementation capacity, and corruption (Schwartz et al. 2020).
Small states spend more on social development, without achieving superior outcomes than other EMDEs. For example, small states’ expenditures on education and healthcare is about 2 percentage points of GDP higher than in other EMDEs at comparable income levels, while their Human Development Index (HDI) scores are broadly similar. Small states could more effectively leverage technology to improve expenditure efficiency (Favaro 2008). Public expenditures in small states are also more rigid than other EMDEs, with a significant share allocated to subsidies, numerous public enterprises, the public wage bill, and resources needed to respond to natural disasters (Alichi, Shibata, and Tanyeri 2021; World Bank 2023b). The large wage bills in small states, which have tended to ratchet upward during economic upswings without offsetting downward adjustments in downturns, exacerbates fiscal vulnerabilities for these countries (Mitchell, James, and Wickham 2019).

**FIGURE 4.13 Expenditure efficiency in small states and other economies**

Small states spend more, relative to GDP, on social development and infrastructure investment than other EMDEs, but do not achieve superior outcomes. Several factors, including weak governance and implementation challenges, contribute to inefficiencies in public projects. Small states, particularly commodity exporters, spend significant amounts on subsidies, especially for energy consumption. Digital connectivity is particularly poor in small states in EAP and SSA, but significantly better in small states in LAC than in other EMDEs.

**A. Healthcare, education expenditures and human development outcomes, 2011-21**

<table>
<thead>
<tr>
<th>Country Type</th>
<th>Health Expenditure</th>
<th>Education Expenditure</th>
<th>HDI Score</th>
<th>RHH</th>
<th>RHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small states</td>
<td>8</td>
<td>4</td>
<td>0.8</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>EMDEs excl. small states</td>
<td>6</td>
<td>4</td>
<td>0.8</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>EMDEs excl. small states and LICs</td>
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<td>2</td>
<td>0.8</td>
<td>0.6</td>
<td>0.4</td>
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</table>

**B. Spending efficiency, 2010-20**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Small states</th>
<th>EMDEs excl. small states</th>
<th>Advanced economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>1.0</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Education</td>
<td>60</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Health</td>
<td>40</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Investment</td>
<td>20</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

**C. Energy subsidies, 2022**

<table>
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<tr>
<th>Source of Subsidies</th>
<th>Small states</th>
<th>EMDEs excl. small states</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
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<td>3</td>
</tr>
<tr>
<td>Natural gas</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Electricity</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**D. Digital connectivity, 2019**

<table>
<thead>
<tr>
<th>Region</th>
<th>Small states</th>
<th>EMDEs excl. small states</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAC</td>
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<td>40</td>
</tr>
<tr>
<td>EAP</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>SSA</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>

Sources: Black et al. (2023); Cantu-Bazaldua (2021); GFS (database); Herrera et al. (forthcoming); WDI (database); World Bank.

Note: EAP = East Asia and Pacific; EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean; LICs = Low-Income Countries; SS = Small states; SSA = Sub-Saharan Africa.

A. Panel shows the Human Development Index (HDI) score for 2021 and average health and education expenditures as a percent of GDP for 30 small states and 104 EMDEs excluding small states for the period 2011-21.

B. Bars show average efficiency score for up to five different methodologies for 35 small states for health, 6 small states for education, and 8 small states infrastructure investment for the period 2010-20 from Herrera et al. (forthcoming). Sample includes 32 advanced economies and up to 111 EMDEs excluding small states.

C. Bars show average explicit subsidies as a percent of GDP by energy type in 2022. Sample includes 20 small states, 12 small states commodity exporters, 8 small states commodity importers, and 113 EMDEs excluding small states.

D. Digital connectivity is a composite measure of Internet access of the population, international bandwidth per Internet user, and latency rate (a measure of network performance). Bars and line show medians of country groups. Sample includes 13 EAP small states, 11 LAC small states, 6 SSA small states, and 117 EMDEs excluding small states.

**Subsidies.** As in other EMDEs, governments in some small states provide generous fuel and energy subsidies that often favor high-income households and underpin a range of sometimes poorly targeted social welfare programs (Del Granado, Coady, and Gillingham 2012; Black et al. 2023). Small states’ energy subsidies, relative to GDP, are on average slightly lower than in other EMDEs, but in small-state commodity exporters they are markedly higher. Some small states have begun to phase out fuel and other subsidies since the pandemic. For example, Suriname, a commodity exporter, has begun to phase out its large fuel and energy subsidies, whose value in 2022 has been estimated at 5.3 percent of GDP (IMF 2023c). Reducing these poorly targeted subsidies can help governments increase spending in critical areas such as healthcare, education, and climate-resilient infrastructure. Winding back fossil-fuel subsidies can also support other policy objectives, notably encouraging investment in renewable energy, mitigating climate change, and reducing pollution.

**State-owned enterprises.** SOEs are a major source of spending pressure and fiscal risk in small states. The outsized role of the public sector in providing goods and services has led to a proliferation of SOEs in many small states. Small states in LAC are some of the most densely populated countries with SOEs in the Western Hemisphere (Reyes-Tagle et al. 2022). SOEs are generally unprofitable, inefficient, and poorly managed, requiring large fiscal transfers and posing cash flow and contingent liability risks to their governments. In some small states, governments are required to cover annual losses of SOEs amounting to as
much as 9 percent of GDP (Reyes-Tagle et al. 2022). The pandemic has further increased fiscal risks from SOEs, including from national airlines in some Pacific Island small states that suffered from the collapse in tourism (Balasundharam et al. 2021). State-owned utility companies usually are also among those that pose large fiscal risks. For example, in São Tomé and Príncipe, the public electricity and water company accumulated arrears amounting to around one-third of GDP in 2022 (World Bank 2023f). Weak fiscal governance is one of the key factors contributing to the inefficiency of SOEs. Policymakers should prioritize bolstering the financial management of these entities, emphasizing robust transparency and accountability frameworks, including through community service obligation mechanisms, and consolidation and privatization where appropriate (Reyes-Tagle et al. 2022).

Aside from phasing out poorly targeted subsidies and transfers, to improve spending efficiency, policy makers in small states should improve public financial management and public investment management (see chapter 3). They can enhance the effectiveness of education spending by developing and implementing evidence-based and carefully costed initiatives that target specific improvements in learning outcomes. Greater regional cooperation may also help them reduce overhead costs, including relating to some administrative tasks (World Bank 2023b). The impact of health spending can be strengthened by focusing on high-return investments—including prevention and primary health care—and ensuring value for money in large expenditure areas such as human resources and pharmaceuticals. Finally, policy makers need to exploit emerging opportunities from innovations in digital connectivity to reduce service-delivery costs and expand telehealth and similar services.

Robust fiscal frameworks

Small states need resilient fiscal frameworks. Large external shocks, such as natural disasters, global recessions, pandemics, and commodity-price shifts, have had long-lasting impacts on debt and fiscal positions in small states, and are likely to continue doing so (Lee, Zhang, and Nguyen

FIGURE 4.14 Fiscal performance and fiscal frameworks

Government revenue and expenditure in small states over the past decade were characterized by volatile growth, leaving limited fiscal buffers in many cases, as indicated by levels of public debt and primary balances. Shortcomings in fiscal management may reflect, in part, the relatively low proportion of small states with fiscal rules, fiscal councils, and sovereign wealth funds, and the relatively low quality of governance.

A. Revenue and expenditure growth in small states

B. Public debt and primary fiscal balances in small states, 2020-23

C. Share of economies with fiscal rules, 2021

D. Share of economies with fiscal councils, 2021

E. Share of economies with sovereign wealth funds, 2022

F. Quality of governance, 2000-22

Sources: Davoodi et al. (2022a); Global SWF; International Monetary Fund; WDI (database); WEO (database); World Bank.

Note: EMDEs = emerging market and developing economies.

A. Annual growth rate of real revenue and real expenditure in 35 small states.

B. Average public debt to GDP ratio and primary balance to GDP ratio in 32 small states for the period 2020-23.

C–E. Sample includes 35 small states, 13 small states commodity exporters, 22 small states commodity importers, 119 EMDEs excluding small states, and 38 advanced economies.

C. Percent of economies that have fiscal rules as of 2021.

D. Percent of economies that have fiscal councils as of 2021.

E. Percent of economies that have sovereign wealth funds as of 2022.

F. Average of Worldwide Governance Indicators for the period 2000-22. Sample includes 35 small states, 13 small states commodity exporters, 22 small states commodity importers, 119 EMDEs excluding small states, and 38 advanced economies. Dotted red line denotes maximum score of 2.5 for governance indicators.
country-specific characteristics, notably vulnerability to natural disasters, can bolster the effectiveness of such rules (IMF 2022b).

**Fiscal councils.** These technical bodies, working independently of government, are integral to a rules-based fiscal framework, supporting fiscal transparency by evaluating fiscal plans and budget forecasts, and overseeing adherence to fiscal rules. Non-government actors, such as academics and private sector analysts, who can help promote prudent fiscal policy by providing public scrutiny of government decisions and demanding accountability, tend to be more limited in small states. Hence, fiscal councils can substantially strengthen fiscal frameworks, especially in commodity exporters that are susceptible to weak governance and less transparent fiscal operations. They are most effective when they operate with a high degree of independence, ample funding, and well-defined mandates aligned with fiscal rules (Davoodi et al. 2022b). Among small states, The Bahamas and Grenada have established fiscal councils to strengthen their fiscal frameworks, with the objective of monitoring and reporting on government’s compliance with fiscal objectives, including fiscal rules (Mooney, Wright, and Grenade 2018). The effectiveness of fiscal frameworks in small states, encompassing both fiscal rules and fiscal councils, is exemplified by the case of Grenada. Enforceable and flexible fiscal rules were instrumental in reducing the country’s public debt from 105 percent of GDP in 2013 to 60 percent of GDP in 2019 (IMF 2019). As of 2023, Grenada’s public debt stood at 62 percent of GDP.

**Sovereign wealth funds and other fiscal stabilization funds.** While these funds exist in several small states, their sizes vary, and in some cases, they are large relative to GDP (Gratcheva and Emery 2021). Where they do not currently exist, policy makers should consider establishing them, and using them to enhance fiscal sustainability and help manage volatility. These funds can play a particularly important role in reducing small states’ vulnerability to external shocks. Sovereign wealth funds can help stabilize government consumption, and mitigate the adverse effects of revenue volatility on fiscal outcomes (Ehigiamusoe and Lean 2018; IMF 2015).
Countries with sovereign wealth funds that have a short- to medium-term stabilization objective exhibit more stable fiscal policies, with 14 percent less volatile government consumption than in countries without such funds (Al-Sadiq and Gutierrez 2023). In small commodity-exporting economies, sovereign wealth funds have been shown to reduce fiscal policy volatility (Giles, Gauto, and Khadan 2021). The benefit of these funds can be maximized by ensuring strong governance arrangements, transparency, and simple operational rules that constrain discretion. Fund balances should provide meaningful buffers against large fiscal shocks, considering the rising threat posed by climate change-related natural disasters. Sovereign wealth funds can be established using revenue windfalls from economic upturns and savings from improved spending efficiency.

Small states have considerable room to improve their fiscal frameworks. Some small states began adopting fiscal rules in the late 1990s, including, in LAC, for example, Antigua and Barbuda, Dominica, and Grenada. By 2021 about one-third (12) of small states had adopted some type of fiscal rule, compared with half of other EMDEs. All small states with a fiscal rule also have a debt rule. Eight of these countries have balanced-budget rules, four have expenditure rules, and two have revenue rules. Few small states have independent fiscal councils, as with other EMDEs. Although the proportion of small states with sovereign wealth funds is comparable to other EMDEs, both are lower than in advanced economies. Sovereign wealth funds in small states vary in design and goals. Some function as trust funds to secure long-term budget self-reliance, particularly in EAP small states (Gratcheva and Emery 2021). Others have a strong focus on investment and development objectives, with fewer emphasizing clear stabilization roles (Al-Sadiq and Gutierrez 2023). Sovereign wealth funds should aim to strike a balance between building long-term savings, including for development goals, and managing short- to medium-term fiscal risks faced by small states, such as volatility and external shocks (Ossowski 2021).

**Fiscal transparency and governance.** Improving fiscal transparency and broader governance, including policies to prevent money laundering and the financing of terrorism, is crucial for small states. This is particularly so given their consistently low rankings on budget transparency indexes. Enhancing accessibility to budget documentation, and increased dialogue with stakeholders and the public, can yield benefits for these countries. For example, improvements in data transparency have been associated with reductions in borrowing costs, especially for countries with strong institutional quality (Cady and Pellechio 2006; Kubota and Zeufack 2020).

In summary, taking into account the distinct challenges faced by small states, as a priority they need to establish well-designed, flexible, but enforceable rules-based fiscal frameworks with adequate buffers to withstand frequent and large external shocks. Fiscal policy in small states should be firmly anchored within credible medium-term fiscal frameworks, ensuring ample fiscal space for countercyclical policies, and reinforced by sovereign wealth funds focused on managing volatility and external shocks. These frameworks should be complemented by efforts to better harness revenues from stable tax sources and improve the efficiency of already high government spending.

**International cooperation**

Concerted international cooperation is needed to help small states address the deterioration in their fiscal positions in the aftermath of the pandemic. Given their substantial expenditure pressures, unique vulnerabilities—notably their particularly high exposure to climate change-related natural disasters—and limited institutional capacity and access to private finance, small states will need continued access to well-coordinated and tailored financial and technical assistance from the international community to help strengthen their fiscal positions, bolster their institutional frameworks, address reform needs, and build resilience (Fuje et al. 2023).

Flexible development finance such as concessional lending and grants—including through IDA for eligible small states—can help to provide needed resources (figure 4.15; World Bank 2023g, 2023h). So can continued international efforts to
governments cushion the fiscal impact of natural disasters (World Bank 2022). These regional initiatives could be expanded to global risk pooling to boost efficiency, further diversify risks, and extending support beyond the initial response phase (Ciullo et al. 2023). Adding catastrophic bonds—which provide compensation to the issuer when predefined natural disaster risks are realized—to disaster risk financing options could further strengthen financial resilience in small states (OECD 2024).

Rising debt and borrowing costs have increased debt-servicing burdens and heightened the urgency of addressing unsustainable debt. Almost one-third of small states have defaulted or restructured debt since 2003, including two (Belize and Suriname) since the pandemic (Asonuma and Trebesch 2016; Erce, Mallucci, and Picarelli 2022). In most cases, these countries received support from international financial institutions, along with debt relief from creditors. Around one-quarter of small states benefited from IMF support for policy programs during 2011-23, including five countries since the pandemic. Debt relief and restructuring processes, including the G20 Common Framework, need to recognize the unique challenges facing small states. They should also take into account the increasingly diverse creditor landscape—particularly the crucial role of non-Paris Club members, especially China, an increasingly important lender which has been involved in debt-restructuring negotiations with several small states (Horn, Reinhart, and Trebesch 2022). The international community can also help improve debt sustainability by working to enhance debt transparency across the world, including by increasing the availability of relevant statistics and by promoting better transaction-disclosure practices (Maslen and Cigdem 2022).

Finally, the international community can continue to support small states through technical assistance. Small states have limited institutional capacity. Like many EMDEs, they may lack the technical know-how required to implement in a timely manner adequate fiscal reforms—including strengthening domestic revenue mobilization, reforming SOEs, establishing a sovereign wealth fund and implementing fiscal rules

mobilize private capital. Small states face challenges in funding substantial investments in climate-change adaptation, especially because domestic revenues have been slow to recover in the wake of the pandemic. Some countries have used debt-for-climate swaps to fund climate-adaptation initiatives (Thomas and Theokritoff 2021). Belize successfully negotiated debt forgiveness in exchange for implementing a program centered on rainforest conservation and the management of protected areas (IMF 2022c). More recently, the World Bank allowed small states to prioritize disaster recovery over debt repayment during catastrophic events (World Bank 2023i).

The international community can continue to assist in building small states’ resilience to natural disasters through financing and insurance solutions. Cost constraints resulting from higher exposure to natural disasters often result in inadequate insurance coverage for small states (Cebotari and Youssef 2020). For example, regional risk pooling mechanisms such as the Caribbean Catastrophe Risk Insurance Facility, the African Risk Capacity, and the Pacific Catastrophe Risk Assessment and Financing Initiative—have helped some small-states

FIGURE 4.15 Donor support for small states and other EMDEs

Reflecting their significant development challenges, small states receive substantially more official development assistance, in relation to GDP, than other EMDEs. Larger shares of small states are grant-reliant and eligible to access IDA financing than other EMDEs.

A. Official development assistance, 2011-23

B. Shares of grant-reliant and IDA-eligible countries

Sources: WDI (database); World Bank.
Note: EMDEs = emerging market and developing economies; IDA = International Development Association.
A. Average official development assistance as a percent of GDP. Sample includes 28 small states and 104 EMDEs excluding small states.
B. Share of countries that are grant reliant, and those that are classified as IDA eligible as of 2023, as detailed in table 4.1.
Worsening fiscal and debt positions in small states, coupled with increased vulnerability to external shocks, including from climate change, and the need to address long-standing development needs, demand action through both domestic policy measures and international support.

These obstacles are not insurmountable, however. Governments in small states retain the capacity to build fiscal resilience, with support from the international community. There is ample room to boost domestic revenues and improve spending efficiencies. Raising tax revenues requires small states to broaden tax bases; in some cases, introduce taxes that are widely used in other EMDEs; strengthen tax collection; and consider raising tax rates. Strengthening fiscal governance and financial management, and improving transparency and accountability frameworks, can significantly enhance expenditure efficiency, particularly in the large state-enterprise sectors in many of these countries. Better targeted social spending and subsidies could further increase fiscal space for governments to invest in human capital and build resilience to external shocks.

Small states should prioritize the establishment of rules-based fiscal frameworks tailored to their distinct characteristics and vulnerabilities. These frameworks should include fiscal rules that not only establish discipline but also allow countercyclical policy to manage the effects of frequent external shocks, especially those arising from natural disasters; fiscal councils to bolster fiscal discipline; and sovereign wealth funds that provide buffers against large shocks. Small states currently lacking access to adequate natural disaster insurance facilities could benefit from them to cushion the fiscal impact of natural disasters.

Small states will continue to require access to well-coordinated and tailored financial and technical assistance from the international community. These include financial support to help address debt challenges and support investment in climate change resilience, and technical assistance to help improve fiscal policy management, and the implementation of reforms.
### TABLE 4.1 EMDE small states, by feature

<table>
<thead>
<tr>
<th>Country</th>
<th>Tourism reliant</th>
<th>Commodity exporter</th>
<th>FCS</th>
<th>Micro states</th>
<th>Risk of overall debt distress</th>
<th>Grant reliant</th>
<th>World Bank lending category</th>
</tr>
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<tbody>
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<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>IBRD</td>
</tr>
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<td>Bhutan</td>
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<td></td>
<td></td>
<td></td>
<td>Moderate</td>
<td>X</td>
<td>IDA</td>
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<td>X</td>
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<td>Blend</td>
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<td></td>
<td>High</td>
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<td>IDA</td>
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<td>In distress</td>
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<td>Blend</td>
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<tr>
<td>São Tomé and Príncipe</td>
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<td></td>
<td>In distress</td>
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<td>Vanuatu</td>
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<td></td>
<td></td>
<td>Moderate</td>
<td>X</td>
<td>IDA</td>
</tr>
</tbody>
</table>

Sources: GFS (database); UN World Tourism Organization; World Bank.

Note: Tourism-reliant countries are those with inbound tourism expenditure as a share of GDP during 2015-19 above the 3rd percentile of the share in all EMDEs, based on UN World Tourism Organization data. Commodity exporter economies are those when, on average in 2017-19, either (1) total commodities exports accounted for 30 percent or more of total exports or (2) exports of any single commodity accounted for 20 percent or more of total exports. Economies for which these thresholds were met as a result of re-exports were excluded. Micro states are those with a population of less than 200,000. Risk of overall debt distress ratings reflect the latest published ratings based on the IMF-World Bank low-income debt sustainability analysis framework. Dates of latest published results vary across countries. Grant-reliant countries are those with grants as a share of GDP during 2015-2021 above the 90th percentile of all EMDEs. FCS = fragile and conflict-affected situations; IBRD = International Bank for Reconstruction and Development; IDA = International Development Association.
ANNEX 4.1 Debt decomposition

Changes in the public debt-to-GDP ratio (denoted by $d$ in equation 4.1.1) can be decomposed into several explanatory terms. Specifically, changes in the ratio can be decomposed into contributions from GDP growth, primary fiscal balances—which reflect the difference between revenues and non-interest expenditures—interest costs, inflation, and other factors.

Following World Bank (2023c), one equation for decomposing changes in the debt-to-GDP ratio is as follows:

$$d_t - d_{t-1} = i_t - π_t - g_t (1 + π_t) (1 + g_t) d_{t-1}$$

$$- pb_t + \text{other factors}$$

In equation 4.1.1 $i_t$ is the effective nominal interest rate; $π_t$, inflation (measured as the GDP deflator); and $g_t$ is real GDP growth. Debt, $d_t$, and the primary fiscal balance, $pb_t$, are scaled by nominal GDP. The term “other factors” includes factors such as exchange rate depreciation, privatization proceeds, the materialization of contingent liabilities, and other ad-hoc adjustments to debt stocks. Equation 4.1.1 can be reorganized to identify the contributions to changes in the debt-to-GDP ratio from key components in additive form as follows:

$$d_t - d_{t-1} = \frac{i_t - π_t - g_t (1 + π_t)}{1 + g_t} d_{t-1}$$

$$- \frac{g_t}{1 + g_t} d_{t-1} - pb_t + \text{other factors}$$

where $γ_t = (1 + g_t)(1 + π_t)$

Equation 4.1.2 is used as the basis for decomposing the change in the debt-to-GDP ratio into the attributable components of: (1) the primary fiscal balance; (2) interest costs; (3) inflation; and (4) real GDP growth. Due to data limitations for the countries of interest, notably on ad-hoc debt stock adjustments and the currency composition of debt, the contributions from other factors are calculated as the difference between changes in the debt-to-GDP ratio and the sum of components (1) to (4). The decomposition includes all small states with data available for all terms in equation 4.1.2, for the period 2011 to 2026, as detailed in table A4.1.1.

ANNEX 4.2 Fiscal reaction function

Fiscal reaction functions show the extent to which fiscal policy reacts to changes in the level of government debt (Bohn 1998; Mendoza and Ostry 2008). The basic equation for a government’s fiscal reaction function is as follows:

$$pb_{i,t} = \tau \cdot d_{i,t-1} + \epsilon_{i,t}$$

(4.2.1)

where $pb_{i,t}$ and $d_{i,t}$ refer to country $i$ primary fiscal balance and debt to GDP ratios at time $t$. The parameter $τ$ is a measure of the responsiveness of the primary balance to changes in debt levels, and $ε_{i,t}$ is the error term. The model specification in equation 4.2.1 is extended to control for other economic, policy, and political factors as follows:

$$pb_{i,t} = \alpha + \delta pb_{i,t-1} + \tau \cdot d_{i,t-1} + \beta X_{i,t} + Θ_t + γ_t + \epsilon_{i,t}$$

(4.2.2)

where $X_{i,t}$ includes economic growth, inflation, national elections, and the presence of a fiscal rule for country $i$ at time $t$ (table A4.2.1). The variables $Θ_t$ and $γ_t$ are dummy variables representing country fixed effects and time fixed effects. The regressions are estimated for the period 2001-2023 (table A4.2.2). As detailed in table A4.1.1 all small states for which data are available are included in the sample, except grant-dependent economies. As grants partly reflect the policy choices of donors, the presence of large grants may distort the interpretation of the results.

Endogeneity and cross-sectional correlation are key issues to address when estimating equation 4.2.2. First, the inclusion of $pb_{i,t-1}$ can cause the estimated coefficient ($δ$) to be biased when estimated with fixed effects estimators (Nickell 1981), although the bias diminishes when the time dimension is relatively large (Judson and Owen 1999; Nickell 1981). The bias-corrected least-squares dummy variable estimator of Bruno (2005) is used as a robustness check of the results obtained from the fixed effects estimator. However, a further methodological challenge is that inflation and growth are likely to be
endogenous to the contemporaneous primary balance. As such, lagged values (first and second lags) of both variables are used as instruments in a panel fixed effects instrumental variable (FE-IV) estimator.

The sample of countries, especially for the small states group, share similar features such as high dependence on commodity and tourism exports, and susceptibility to external shocks. These characteristics may imply the presence of cross-sectional dependence. Time fixed effects are used in the FE-IV estimator to control for these common factors (see Jansen 2016). Additionally, the Prais-Winsten estimator with correlated panels corrected standard errors (PCSEs) and the Driscoll-Kraay estimators are used as robustness checks to account for the presence of cross-sectional dependence (see Prais and Winsten 1954; Driscoll and Kraay 1998).
TABLE A4.1.1 List of small states included in the debt decomposition analysis, and the fiscal reaction function analysis

<table>
<thead>
<tr>
<th>Antigua and Barbuda*</th>
<th>Comoros*</th>
<th>Maldives*</th>
<th>St. Kitts and Nevis*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahamas, The*</td>
<td>Djibouti*</td>
<td>Marshall Islands</td>
<td>St. Lucia*</td>
</tr>
<tr>
<td>Bahrain*</td>
<td>Dominica*</td>
<td>Mauritius*</td>
<td>St. Vincent and the Grenadines*</td>
</tr>
<tr>
<td>Barbados*</td>
<td>Eswatini*</td>
<td>Micronesia, Fed. Sts.</td>
<td>Suriname*</td>
</tr>
<tr>
<td>Belize*</td>
<td>Fiji*</td>
<td>Montenegro*</td>
<td>Timor-Leste</td>
</tr>
<tr>
<td>Bhutan</td>
<td>Grenada*</td>
<td>São Tomé and Príncipe</td>
<td>Tonga</td>
</tr>
<tr>
<td>Brunei Darussalam*</td>
<td>Guyana*</td>
<td>Seychelles*</td>
<td>Tuvalu</td>
</tr>
<tr>
<td>Cabo Verde*</td>
<td>Kiribati</td>
<td>Solomon Islands</td>
<td>Vanuatu</td>
</tr>
</tbody>
</table>

Note: Table lists countries included in the debt decomposition exercise described in annex 4.1. Countries with * are also included in the sample for the fiscal reaction function analysis described in annex 4.2.

TABLE A4.2.1 Variables, definitions, and data sources for fiscal reaction function analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>Sources</th>
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</thead>
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<tr>
<td>Primary balance</td>
<td>Primary balance as a share of GDP</td>
<td>World Economic Outlook, IMF</td>
</tr>
<tr>
<td>Debt</td>
<td>General government debt as a share of GDP</td>
<td>World Economic Outlook, IMF</td>
</tr>
<tr>
<td>Economic growth</td>
<td>Real GDP growth</td>
<td>World Economic Outlook, IMF</td>
</tr>
<tr>
<td>Inflation</td>
<td>Inflation, average consumer prices</td>
<td>World Economic Outlook, IMF</td>
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<tr>
<td>National elections</td>
<td>Dummy variable equals 1 for the year of and prior to general elections in countries, and 0 otherwise</td>
<td>Cruz, Keefer, and Scartascini (2018)</td>
</tr>
<tr>
<td>Fiscal rule</td>
<td>Dummy variable equal to 1 for the period of time countries had a fiscal rule in place and 0 otherwise</td>
<td>Davoodi et al. (2022a)</td>
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</table>

Note: IMF = International Monetary Fund.

TABLE A4.2.2 Small states’ fiscal reaction functions: Results

<table>
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<tr>
<th></th>
<th>Baseline FE</th>
<th>Panel FE-IV</th>
<th>Extended model FE</th>
<th>Panel FE-IV</th>
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<td>0.476***</td>
<td>0.461***</td>
<td>0.474***</td>
<td>0.459***</td>
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<tr>
<td></td>
<td>(0.035)</td>
<td>(0.069)</td>
<td>(0.035)</td>
<td>(0.069)</td>
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<tr>
<td>Lagged debt ratio</td>
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<td>0.0202**</td>
<td>0.0140**</td>
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</tr>
<tr>
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<td>(0.005)</td>
<td>(0.009)</td>
<td>(0.006)</td>
<td>(0.009)</td>
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<td>0.0534</td>
<td>0.0779</td>
<td>0.0553</td>
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<td></td>
<td>(0.048)</td>
<td>(0.049)</td>
<td>(0.048)</td>
<td>(0.049)</td>
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<tr>
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<td>(0.042)</td>
<td>(0.035)</td>
<td>(0.042)</td>
<td>(0.036)</td>
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<td>Elections</td>
<td>-0.439</td>
<td>-0.501</td>
<td>-0.439</td>
<td>-0.501</td>
</tr>
<tr>
<td></td>
<td>(0.400)</td>
<td>(0.483)</td>
<td>(0.400)</td>
<td>(0.483)</td>
</tr>
<tr>
<td>Fiscal rule</td>
<td>0.243</td>
<td>0.389</td>
<td>0.243</td>
<td>0.389</td>
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<tr>
<td></td>
<td>(0.657)</td>
<td>(0.745)</td>
<td>(0.657)</td>
<td>(0.745)</td>
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<tr>
<td>Number of observations</td>
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<tr>
<td>Number of countries</td>
<td>22</td>
<td>22</td>
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</table>

Note: Dependent variable is primary balance as a percent of GDP. Lagged values (first and second lags) of inflation and growth are used as instruments in the panel fixed effects instrumental variable (FE-IV) estimator. Elections and fiscal rules are dummy variables. Time fixed effects are included in each regression. Robust standard errors in parentheses. *** indicates statistical significance at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. These results are robust to other approaches, including the bias-corrected least-squares dummy variable, Prais-Winsten, and Driscoll-Kraay estimators.
References


World Bank. 2022. “Risk Insurance Builds Climate and Disaster Resilience in Central America and the Caribbean.” Results Brief, World Bank, Washington, DC.


