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A Primer on Restoring Fiscal Space and Sustainability

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Abstract: This paper provides an overview of issues related to fiscal consolidation drawing on the literature; it distills some lessons from fiscal consolidation episodes using a new database covering 196 countries from 2000 to 2023. The paper discusses the motives, timing, design, and political economy of fiscal consolidation, as well as its macroeconomic and social impacts. We find that fiscal consolidation is often necessary and successful in restoring fiscal sustainability by stopping debt accumulation, but less successful in lowering debt levels; moreover, it can also entail significant costs and trade-offs in terms of growth, poverty, and inequality. Composition also matters, as expenditure-based consolidations tend to be more successful than revenue-based consolidations and less likely to cause a deterioration in poverty rates or inequality. However, revenue gains usually play an important role starting in the second year of consolidation. Overall, the paper suggests that successful fiscal consolidation requires careful consideration of the economic context, the composition of adjustment, complementary economic policies, and communication and credibility of the strategy. The best way to implement fiscal adjustment is to establish a consolidation strategy in normal/non-crisis times} to ensure that governments do not have to rely on abrupt, pro-cyclical adjustments that may exhaust all buffers in the aftermath of a shock.

Keywords: Fiscal policy; Debt Sustainability;

JEL codes: H2; H5; H63

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Executive Summary

One of the main policy challenges for countries around the world is to reverse the large fiscal deterioration caused by the COVID-19 pandemic and by the spillovers from Russia's invasion of Ukraine to restore fiscal sustainability and space. Fiscal consolidation (or adjustment) is a (multi)yearly strategy that governments use to achieve these goals, using a set of policy and administrative measures. The purpose of this note is to give an overview of the issues that need to be considered when designing fiscal adjustment strategies. The note summarizes the main findings on fiscal adjustments from the economic literature to provide guidance to policymakers who want to undertake such adjustments. A new database that covers 196 countries from 1980 to 2023 is used to identify 108 adjustment episodes. Policy lessons are derived from the features of successful episodes, based on various criteria, from debt stabilization to the impact on growth, poverty, and inequality indicators. We address also some critical questions policymakers and their advisers they face when designing strategies such as: how much fiscal consolidation is needed, whether it is better to raise revenue or lower spending, which expenditures can be reduced, and what the likely effects of fiscal consolidation on the economic performance are, as well as on re-election prospects.

There are several possible motivations for fiscal adjustment by countries. The first is to achieve fiscal sustainability. The COVID-19 pandemic caused a sharp rise in debt and deficits, as governments borrowed heavily to provide fiscal support during the health crisis, while their tax revenues and GDP shrank. This added to the upward trend of debt before the pandemic. Meanwhile, their fiscal positions also suffered from the fiscal response to high food and energy prices. Many countries now have unprecedented levels of debt and deficits. Another reason for fiscal adjustment is to curb inflationary pressures. A third goal is to calm external accounts and exchange rate pressures, to lower borrowing costs and create fiscal space for development needs. Lastly, governments may pursue fiscal consolidation to prevent the public sector from crowding out private consumption and investment.

The benefits of well-designed and timely adjustments, supported by appropriate budgetary frameworks, outweigh the costs of "doing nothing." The political economy and institutional factors are crucial for policymakers to choose a consolidation plan. Empirical evidence shows that voters do not penalize politicians for implementing tight fiscal policies while they do penalize them for higher inflation and unemployment. A well-designed fiscal adjustment strategy can often target undertaxed sources such as wealth and ensure that the adjustment is distributed fairly. On the other hand, delaying adjustment for the fear of the short-term costs can lead to higher inflation, risks of debt distress that will eventually need to be resolved in a more rushed way. Recent global crises can provide a chance to improve budgetary frameworks by introducing fiscal councils and rules or strengthening those already existing. Improved transparency of the budget process is expected to encourage compliance by increasing the reputational cost for non-compliers and creating better incentives for compliers.

Relying only on the effects of economic recovery and the removal of crisis response measures may be short-lived or inadequate. The capacity to deliver consolidation is constrained

without the help of permanent actions to lower the structural part of the fiscal deficit. Moreover, the difficulties of choosing when and how to phase out fiscal support measures or subsidies can also be substantial, especially when those measures affect the interests of organized groups. As finding the right time to phase out support measures is a complicated task that depends on various factors, this aspect should be addressed when measures are introduced and could involve sunset clauses or automatic links between the level of support provided and the occurrence of specific economic conditions.

Economic research shows how to improve the primary balance in a sustainable way while reducing the adverse effects of consolidation on the economy, which is often the main goal for policymakers. The impact of fiscal consolidation on output and employment mainly depends on whether demand or supply is the main channel of transmission. Consolidations that rely more on spending cuts tend to be less harmful than those based on tax hikes, and lead to more lasting fiscal improvements. This is mainly because private investment falls by less when spending is cut than when taxes are raised. This assumes that cuts are made in recurrent spending, as cuts in public investment may cause a drop in private investment and thus overall output. When fiscal consolidations are large, both spending and revenue measures may be needed, and in that case, revenue adjustments should focus on the least damaging taxes. Other supporting reforms such as those related to competition policy, labor policy, and other structural reforms that aim to boost productivity growth could help mitigate the impact.

Our study of previous episodes of fiscal adjustment shows that the typical consolidation episode relies on expenditure cuts and frontloaded. We have built a panel dataset of various indicators and created dummy variables to examine the accuracy of consolidation definitions. The selection of episodes is based on the ex-post trends in fiscal balances and on a combination of criteria, such as improvements in cyclically adjusted and headline primary balance, a consolidation lasting for two years and a need to consolidate as measured by the difference between the debt-stabilizing and the actual primary balance.

Fiscal adjustments were more successful in stabilizing the debt-to-GDP than in reducing it. Adjustments were able to restore fiscal sustainability by bringing the primary balance to a level greater than or equal to the debt-stabilizing primary balance in 69 percent of cases. However, only in 41 percent of the cases primary balance reached the level required to put debt at level below the pre-consolidation period and create fiscal space. At the same time, the possibilities that fiscal consolidations end up damaging the economy or the population are non negligeable. In fact, results show that when success is conditional on achieving debt stabilization simultaneously with a limited impact on non-fiscal variables (output growth, poverty rate, income inequality) the rate of success drops sharply, especially in EMDEs. Revenue-based consolidations are significantly less successful than revenue-based when the goal is to stabilize the debt level (49 versus 83 percent) and are very rarely able to stabilize the debt level without worsening inequality or the poverty rate -only 14 percent of cases were successful, 32 percentage points lower than expenditure-based consolidations.

1. Overview and Objective

The series of shocks that have battered the global economy in the past four years has led to an increase in debt levels, highlighting the need for reining in fiscal deficits and debts. The economic spillovers of the COVID-19 pandemic, followed by Russia's war on Ukraine, led to adverse impacts on fiscal balances for most EMDEs**,** driven by a contraction in government revenue and the need to increase expenditure to mitigate the economic, social, and health impacts of the crises. Consequently, the fiscal position of many EMDEs deteriorated dramatically between 2019 and 2022, even leading to often unsustainable levels of public debt. Rising interest rates and inflationary pressures add to the urgency of fiscal consolidation, which would help reduce the demand for output and credit. At the same time, continued fiscal support is still needed in many countries to mitigate the impacts of these crises on the poor and most vulnerable and to support economic recovery.

Returning to a sustainable fiscal path and restoring fiscal space is the key fiscal policy challenge of our times. Multiple, recurrent crises have created an environment where fiscal space is exhausted, at the same time acting on climate adaptation and mitigation measures is becoming increasingly urgent. Growth prospects are sluggish, and this is likely to lead to an increasing number of people around the world at risk of falling into poverty. Key questions faced by policy makers include: (i) how much fiscal consolidation is needed; (ii) whether to increase revenue or reduce spending; and (iii) whether to consolidate gradually or make a swifter adjustment.

This note provides an overview of issues to be considered when designing fiscal strategies to restore fiscal sustainability and space. Its main audience is fiscal policy makers and advisers, including World Bank economists who lead the fiscal policy dialogue with client countries. The note is instrumental to the design of consolidation strategies when fiscal balances have been deteriorating dangerously. The note presents 1) a review of the ample theoretical and empirical literature which has examined the design and effects of fiscal consolidation and, 2) lessons from successful adjustment episodes using a new database that allows episodes (and their success) to be identified using specific criteria. We first discuss the developments that have made fiscal consolidation more relevant, and more challenging, than before (section 2); this is followed by an overview of the results of political economy considerations that influence the choice of undertaking a fiscal consolidation (or not) (section 3). Attention then moves to how the elimination of emergency response measures and a favorable business cycle can contribute to improvements in fiscal balances (section 4), before discussing some of the results from the literature about the transmission mechanisms from fiscal policy to economic activity, and on the related focus of composition of adjustment (section 5). Lessons are drawn from a descriptive analysis of a group of consolidation episodes, identifying their successful characteristics; the impact of the consolidation episodes on macroeconomic and social indicators and the differences between episodes preceded or not by a shock (section 6).

Its intention is to offer a primer on the main lessons that can be drawn from the large literature on fiscal consolidation, while adding some new insights from a novel database. Consolidations, whether preceded or not by a large adverse shock, usually have serious political and economic effects for policymakers and their advisors (inside or outside government, IOs, think

tanks etc..). Most studies examined for this note tend to ask the right questions, but the wide variety of answers could give the impression that there are no rules when it comes to fiscal consolidation. Therefore, rather than simulating or providing yet another estimation of the size of the fiscal multipliers[2], this note presents a simple descriptive analysis of the implications of 108 consolidation episodes over the period 2000-2023. The episodes have been identified through ex-post trends in fiscal balances, similar to Escolano et al (2018), rather than looking at the budget documents (narrative approach). We also assess if adjustments have been successful in achieving the primary goal of stopping public-debt to GDP growth and if this has happened without harm to growth, poverty, or income distribution indicators. Several lessons can be drawn from these experiences, for example, many fiscal adjustments that have succeeded in stabilizing the debt-to-GDP ratio (typically by increasing the primary balance almost 5 percentage points of GDP) are associated with deterioration in growth compared to previous long-term trends. Moreover, consolidations are generally less successful in stabilizing debt in the wake of adverse terms of trade shocks or when based mainly on increased revenue.

2. Why is fiscal adjustment needed?

Governments have traditionally embarked on an adjustment of their fiscal position to preserve, or restore, its sustainability. Consolidation may follow a protracted period of unsustainable, often procyclical, macroeconomic policies. At the same time, some episodes of fiscal consolidation may reflect a context of economic crisis triggered by a large adverse event, like terms of trade shocks, disasters, sudden increases in global interest rates, or financial sector crises, which end up generating a fiscal unbalance even in countries where fiscal policy had been considered overall prudent up to that moment. There are cases when unsustainable macroeconomic policies and adverse events happen together, for example when the domestic vulnerabilities (high external debt, lower international reserves, large sectoral exposures of the financial sector) act as amplifiers on an external shock. What all cases have in common is that the adverse welfare effects of deficits and debts manifest themselves through the same channels, such as a reduction in short-term economic growth, higher inflation, and deteriorating external accounts.

The most recent global shocks happened in a context marked by much higher levels of debt than in prior crises. In December 2019, a World Bank report highlighted the risks from the rapid accumulation of public and private debt in EMDEs that had been ongoing since 2010, and was the fastest, largest and the most broad-based since the 1970s.[3] The average annual increase in EMDE debt since 2010 was almost 7 percentage points of GDP. As a result, on the eve of the pandemic, global debt levels were higher than at the onset of the Global Financial Crisis of 2008: 2019 gross general government debt had surpassed the 2007 level by 32 percentage points of GDP for advanced economies and by 18 percentage points for EMDEs (Figure 1a). Even before the COVID-19 crisis, there was a significant increase in the number of countries where debt-to-GDP ratio

[2] Fiscal multipliers measure the change in economic output that results from a change in fiscal policy.
[3] Global Waves of Debt, World Bank, 2019

exceeded 90 percent (Figure 1b). Compared to earlier experiences of rapid debt accumulation (World Bank 2019), the pre-pandemic wave was also facilitated by loose financial conditions, including a growing appetite for local bonds. Furthermore, this economic crisis was not associated with a financial crisis, likely due to the strengthened regulation of the banking sector following the 2008-2009 crisis.

In the run up to the Covid-19 induced recession, EMDE countries depleted their fiscal buffers while also implementing procyclical fiscal policies. The average difference between the primary balance and the debt-stabilizing primary balance (the sustainability gap) decreased by 1.5 percentage points of GDP in EMDEs from 2011 to 2019 compared to the previous ten years and turned largely negative (-0.9 percent) (Herrera and Izaki, 2024). A negative sustainability gap leads to an automatic increase in the debt ratio, even if the country is running a budget surplus, if this surplus is not high enough. A zero or even slightly positive value in the sustainability gap does not equal to a prudent fiscal policy, as targeting a level of the primary balance slightly above its debt-stabilizing level can act as insurance against negative surprises in growth (in the short-term) or in the level of the effective interest rate (in the medium-term). This reduction of fiscal buffers has been positively correlated with the procyclical conduct of fiscal policies in EMDEs (Figure 1c): public spending was moderately procyclical in EMDEs (0.19) and countercyclical (-0.14) in advanced economies from 2011 to 2019.

When the shock hit, the size and composition of policy responses differed between advanced and developing countries. Advanced economies and many emerging and developing economies have mitigated crisis' impacts using counter-cyclical fiscal policies and large fiscal deficits (see Annex 2). Emerging markets' response was more muted than in HICs, but still large, with about 1.5 trillion USD in above-the-line fiscal measures and more than 1 trillion USD in support through other instruments, worth more than 7 percent of GDP, on average. Low-income developing countries (LIDCs) had the smallest fiscal response at about 4 percent of GDP (Figure 1d). For most low-income countries, the fiscal space for discretionary measures was limited and the deterioration in fiscal deficits reflects mainly cyclical effects (IMF and World Bank, 2021); for instance, the drop in revenues for commodities producers was partly compensated by lower expenditure. Overall, the fiscal response of many low-income countries also involved significant reallocation of expenditures to address the fiscal pressures generated by the crisis, this also needs to be considered in fiscal strategy design. Countries that had a weak fiscal position prior to the crisis - elevated structural deficits and elevated levels of debt – saw their vulnerabilities exacerbated and required a larger and more urgent fiscal consolidation than countries that entered the crisis with a stronger fiscal position.

Fiscal rules adopted by an increasing number of EMDEs prior to the COVID-19 crisis had limited effect in ensuring fiscal prudence. Following the global financial crisis in 2008, many countries acknowledged that well-defined anti-deficit rules and fiscal responsibility can play an important role in strengthening fiscal management and enhancing transparency and accountability. However, during the COVID-19 crisis, many countries adjusted their fiscal rule limits (including EU countries), and used escape clauses, or suspended their fiscal rules, to accommodate the extraordinary fiscal pressures created by the crisis ((Figures 1e and 1f). In

about 90 percent of countries had deficits larger than the rule limits, while public debt exceeded the limits or anchor levels in over half of countries (Davoodi et al. 2022).

It will take some years before the fiscal position in EMDEs revert to pre-pandemic levels. Because of the combination of an economic crisis (the denominator effect) and the consequent countercyclical policy response leading to a faster widening of the fiscal imbalances (the numerator effect), emerging economies have felt the greatest impact of the compounded shocks; the average deficit for this group) jumping from -4.4 percent in 2019 to -8.7 percent in 2020 and is still not expected to return to 2019 levels by end-2029[4] (Figure 1.g). This translates to a steady debt accumulation of around 25 percentage points of GDP from 2019 to 2029[5]. Prospects in LICs are more favorable, with deficit levels reverting to pre-pandemic levels in 2024, progressively driving down debt levels. While there is little scope to further expand fiscal policy, demands are mounting on governments to spend on defense, decarbonization, industrial resilience, ageing and social security.

For many LICs, elevated levels of debt are associated with a high risk of debt distress. Low-income countries' (LIC) debt sustainability analyses (DSAs) carried out jointly by the IMF and World Bank show around 15 percent of low-income countries are in debt distress and another 40 percent are at high risk of distress[6]. Such high debt levels are associated with significant debt service burdens, crowding out space for pro-poor and growth-enhancing public expenditure. For most of these countries, restoring fiscal sustainability requires fiscal consolidation; for some, additional debt relief, including through the common framework, may be necessary, especially where there is limited scope for fiscal consolidation without threatening the delivery of basic government services.[7]

Although monetary policy is typically the more effective instrument for fighting inflation, fiscal consolidation can play a complementary and supporting role. Inflation in EMDEs has risen between 2020 and 2022 from 5 percent to 9.8 percent and is not projected to converge to the average of 2010-2019 until the end of the current decade. Inflation pressures are particularly felt in LICs, where it is as high as 15.8 percent in the Sub-Saharan Africa region. While above-expected inflation has often supported fiscal consolidation or represented an alternative way to fund the budget[8], fiscal consolidation can help support monetary policy objectives by reducing aggregate demand and contributing to better anchor inflation expectations. To minimize output losses, policy coordination needs to ensure that monetary and fiscal objectives and policies are consistent (Bianchi and Melosi 2022). However, where inflation is primarily imported through higher food and energy prices, the potential role of fiscal consolidation is less clear. The direct contribution of higher energy and food prices to inflation will often be reinforced through exchange rate depreciations resulting from deteriorations in the current account due to rising import bills. The appropriate policy response will partly depend on the expected persistence of

[4] Source WEO database, April 2024.
[5] This trend is confirmed also when Republic of China (where debt will increase from 60.4 percent in 2019 to 110.1 percent by 2029) is removed.
[6] https://www.imf.org/external/pubs/ft/dsa/dsalist.pdf
[7] As of end- 2023, only four eligible countries (Chad, Zambia, Ghana, Ethiopia) have requested debt relief under the G20 Common Framework, while some MICs, such as Sri Lanka, Suriname, are seeking debt restructuring outside the Common Framework.
[8] For a discussion of these channels, see IMF, Fiscal Monitor April 2023.

price spikes of energy and food. However, imported inflation also carries the risk of triggering adverse domestic inflation dynamics by triggering second-round effects.

Fiscal adjustments can be more urgent when borrowing costs are surging. On top of overall monetary policy conditions becoming progressively tighter in response to elevated inflation, driving up yield curves on treasury bonds across the world (also in the long-term part of the curve and for real rates), a steady rise in risk premia paid by EMDEs has been observed since 2022. There is a strong correlation between increases in debt on one side and credit downgrades and higher premia on the other ((Figure 1h and 1i). Growth concerns and other structural factors such as transparency of the budget process, the level of financial development, and the quality of public institutions are also behind this correlation. The possibility of an upward shift in equilibrium real rates cannot be ruled out, with serious and durable consequences for borrowing costs and debt dynamics. A strong commitment to a credible medium-term fiscal adjustment is therefore needed to help drive down borrowing costs, freeing fiscal space to be used to preserve buffers or for development needs[9]

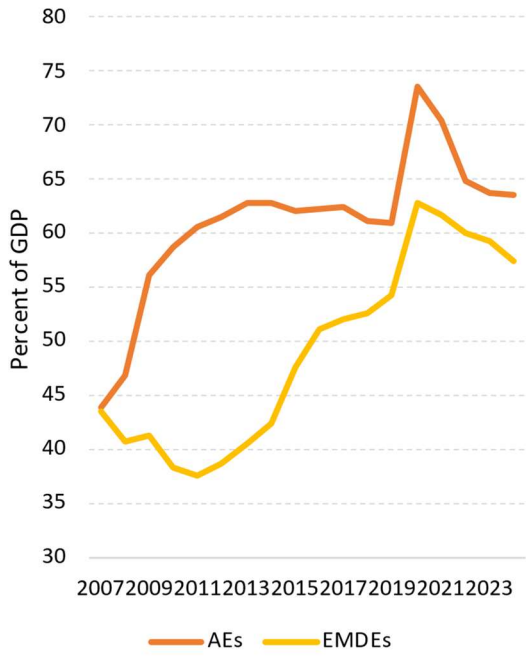
Another concern about elevated debt and fiscal deficits are spillovers into the external accounts. Where expansionary fiscal policies result in unsustainable external balances, fiscal consolidation may be necessary to restore external sustainability (Figure 1j). Fiscal deficits impact the external accounts through various channels. These include: (a) the import content of fiscal spending, (b) the income channel, where increased output triggered by expansionary fiscal policy also leads to an increase in imports, (c) currency appreciation triggered by expansionary fiscal policy, and (d) the debt service channel for external debt (Utz 1995). The relative importance of these channels depends on a country's degree of capital mobility, openness to trade, its exchange rate regime, and elasticity of private to public savings.[10] For example, Bluedorn and Leigh (2011) find that a 1 percent of GDP fiscal consolidation raises the current account balance-to-GDP ratio by about 0.6 percentage points. At the same time, a favorable external situation can offer an environment where fiscal adjustment can be performed without lower output or unemployment losses. Guajardo et al (2011) find that an increase in net exports associated with a fall in the value of the currency partly offsets the contractionary effect on private domestic demand.

[9] David et al. (2019) finds that fiscal consolidation announcements can lead to a decline in sovereign spreads, indicating improved market confidence. Born et al. (2020) find that the risk premium declines in response to a cut of government consumption only if fiscal stress is low, but it rises when the fiscal stress is very severe.

[10] Recent supporting evidence for the effect of fiscal consolidation on the current account (the so-called 'twin deficit hypothesis') comes from Bluedorn and Leigh (2011), Trachanas and Katrakilidis (2013) and Litsios and Pilbeam (2017).

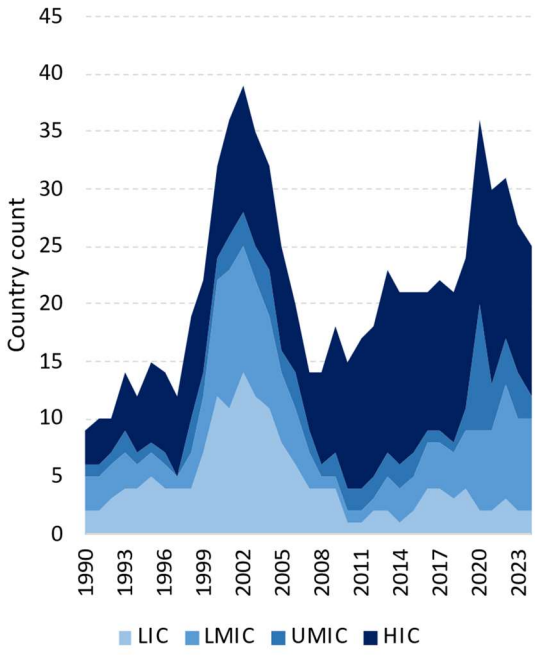
Figure 1 Fiscal policy indicators.

1a. EMDEs indebtedness grew in the decade before Covid-19...



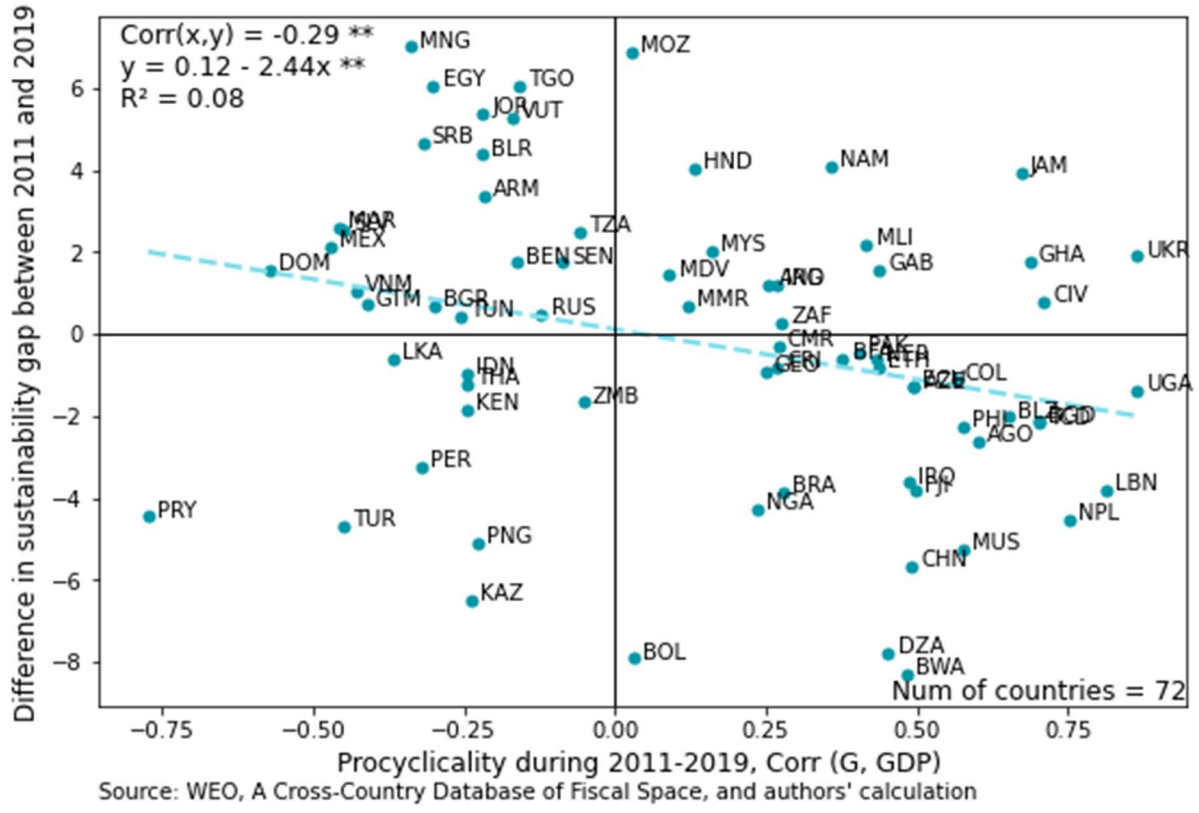
General Government Gross Debt. Source: IMF, April 2024 World Economic Outlook

1b.....as did the number of countries with general government gross debt of more than 90 percent of GDP



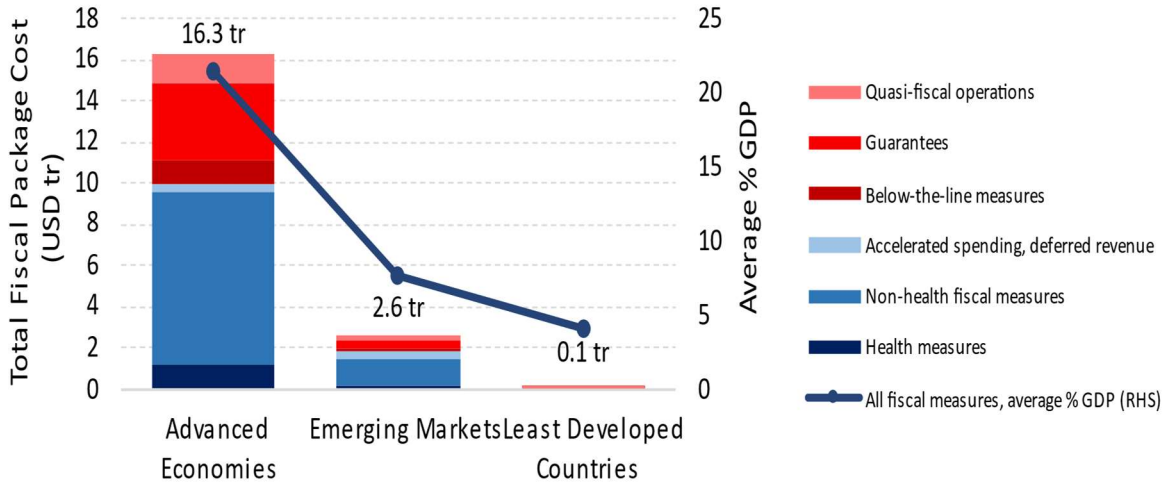
Source: IMF, April 2024 World Economic Outlook

1c. Many EMDEs reduced the safety margin compared to the debt stabilizing primary balance, also because of procyclical spending.



Source: WEO, A Cross-Country Database of Fiscal Space, and authors' calculation

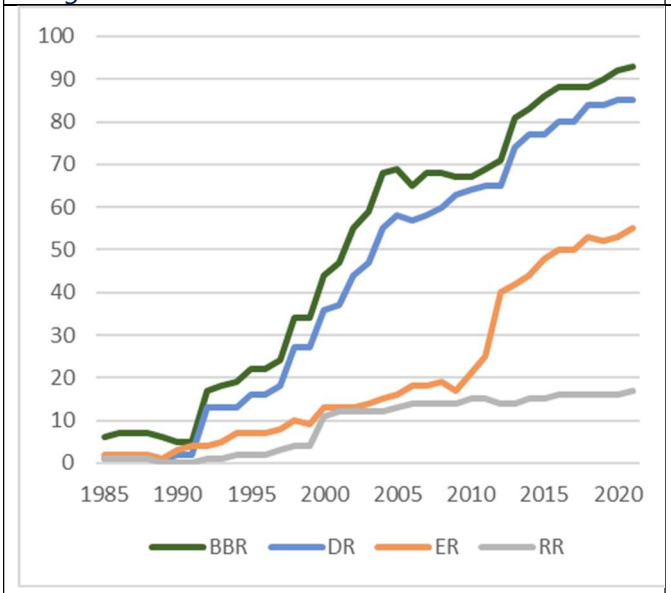
1d. Size and composition of the fiscal support packages were different across income groups



Note: Above-the-line measures are depicted in blue, measures to support liquidity are in red.
Source: IMF Database of Fiscal Policy Responses to COVID-19 (last updated September 2021).[11]

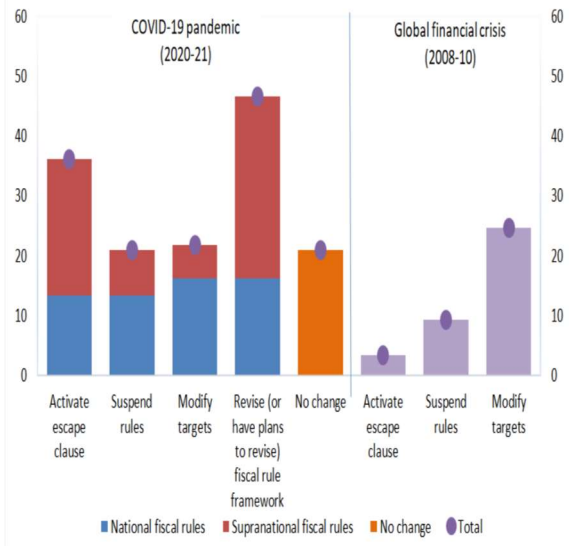
[11] The IMF points out that this dataset is provisional as governments may undertake additional measures; additionally, responses vary by country-specific circumstances. Last updated September 2021.

1e. the adoption of fiscal rules has increased significantly since the GFC, driven by balanced budget and debt rules…



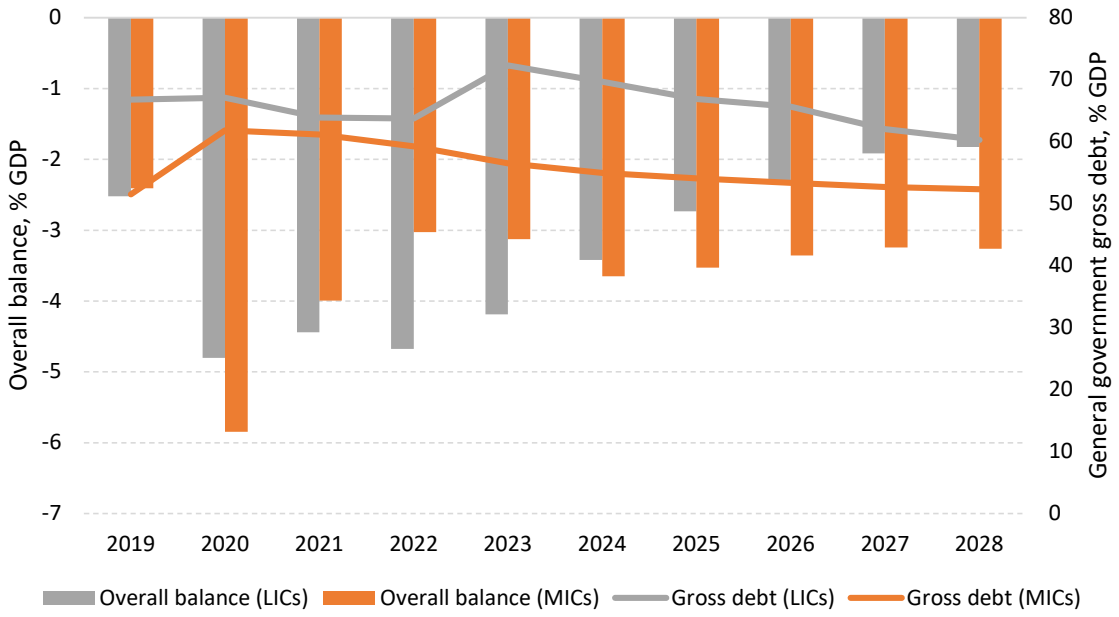
Source: IMF, Fiscal Rules Database.

1f…but were circumvented during the covid-19 crisis more often than in the GFC.



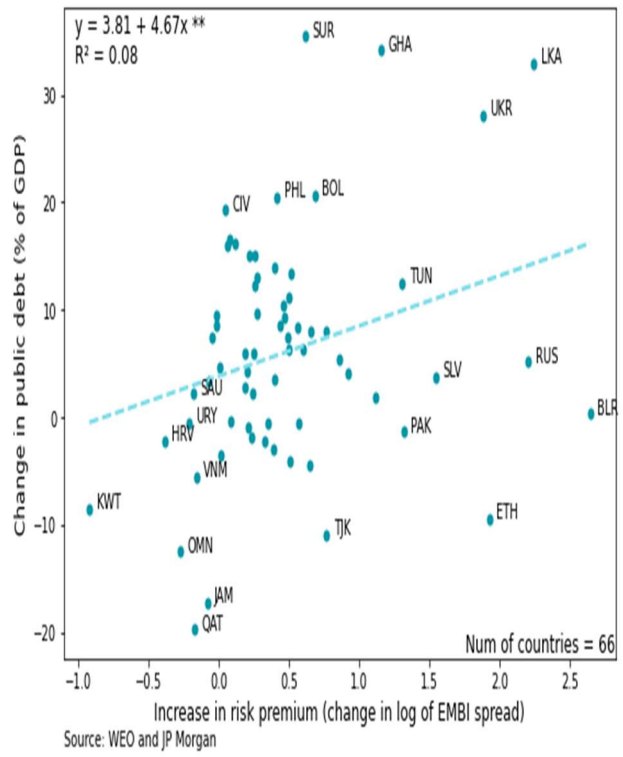
Source: Davoodi et al. 2022

1g. Fiscal balances are projected to diverge in the near future



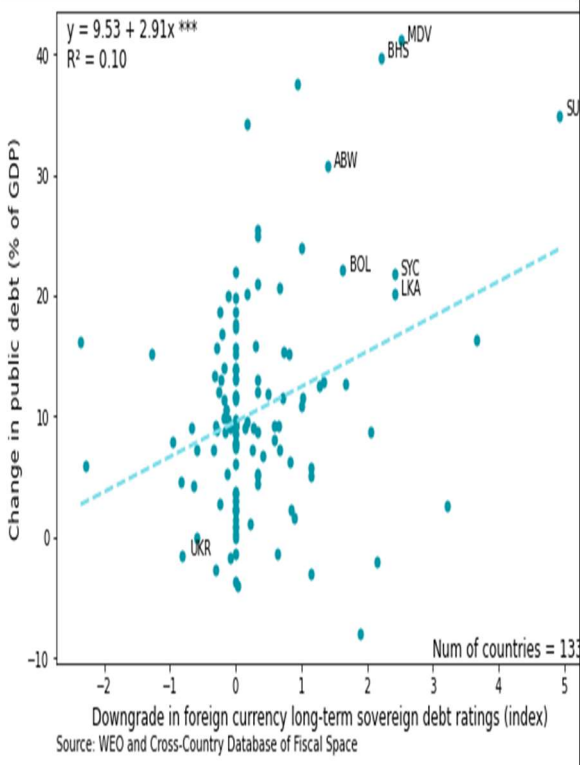
Source: IMF, April 2024 World Economic Outlook

1h. Increases in public debt from 2019 to 2022 have been associated with rapid increases in EMBI spread



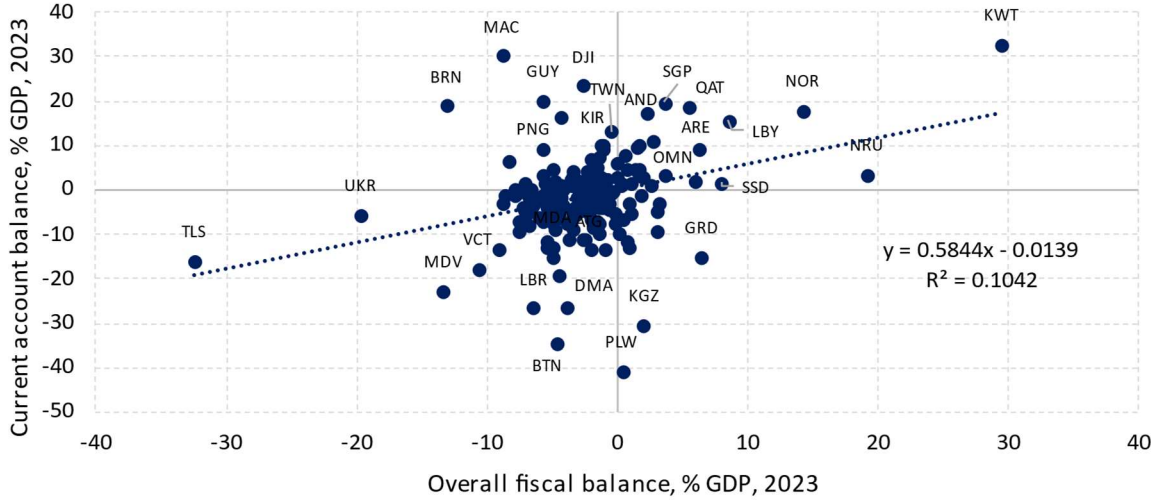
Source: WEO and JP Morgan

1i. rating downgrades have been a major transmission channel from higher debt to higher premia



Source: WEO and Cross-Country Database of Fiscal Space

1j. a large number of EMDEs have concurrent current account and fiscal deficits



Source: World Bank, Macro Poverty Outlook, IMF, World Economic Outloo; April 2024

3. Political economy and institutional considerations.

Fiscal adjustments' design has attracted a lot of attention and many studies have explored its different facets.. This section dives into political economy considerations of interest to policymakers facing the decision to engage in a consolidation plan. It is often believed that policies aiming to reduce deficits are politically troublesome, because they might induce a recession in the short run, or at least bring about a significant slowdown in the economy. Since a potential recession is a major electoral liability, politicians might hesitate to pursue fiscal consolidations. It is therefore important to understand the political economy of adopting measures that could hamper the welfare of some groups, and the overall impact on income distribution. At the same time, putting strong budgetary institutions or rules in place could help reinforce fiscal discipline and the credibility of fiscal consolidation plans, somehow preventing opportunistic behaviors on behalf of policy makers.

Empirical evidence suggests that politicians who engage in tightening fiscal policies do not always suffer when it comes to elections, except when policies have led to increases in inflation and unemployment. There is an emerging consensus in the literature that fiscal consolidation measures are not always politically costly, despite being unpopular with large parts of society. This suggests that policymakers may be able to implement consolidation measures without suffering significant political backlash. Ziogas and Panagiotidis (2021), revisiting the framework of Alesina and Ardagna (1998) for a sample of OECD countries find that voters do not punish politicians for engaging in tight fiscal policies while they punish them for increases in inflation and unemployment. Adjustments that rely primarily on spending cuts are rewarded by the voters while voters do not reward politicians for revenue-based adjustments[12]. Instead, there seems to be a slight tendency for voters to reward politicians for fiscal surpluses (see also Arvate et al., 2009). Chen et al (2019) find that tax-based consolidations do have adverse impacts on reelection prospects, especially broad-based indirect tax and corporate tax reforms.[13] Announcing tax reforms early in a government's term and effectively communicating the rationale and benefits of consolidation measures in terms of enhancing long-term growth prospects can allows politicians to gain public support and reduces adverse re-election prospects.

Adequate design is needed to ensure that the burden of adjustment is shared equitably. Fiscal adjustments can have differential effects on different income groups and may even worsen income inequality. Examining fiscal consolidation episodes in 17 OECD countries from 1978 to

[12] The rationale behind the asymmetry between the impact on re-election prospects between spending and revenue-based adjustments is probably due to the fact that successful adjustments, meaning sustained and able to reduce the debt-to-GDP-ratio by at least 5 percentage points of GDP or to raise the ratio of the primary balance to GDP of at least 2 percentage points, are mostly based on cuts in current spending, that does not dampen growth. However, in a recent paper Duque Gabriel et al. (2023) find that in Europe adjustments led to a significant increase in extreme parties' vote share, lower voter turnout, and a rise in political fragmentation.

[13] However, some research suggests that tax-based fiscal consolidation is often chosen over expenditure-based fiscal consolidation as tax increases tend to be more broad-based and thus do not mobilize specific affected interest groups as much as expenditure cuts, where winners and losers are more readily identifiable with greater risk of significant opposition and push-back (Alesina et al. 1997, Guichard et al. 2007).

2009, Ball et al. (2013) find that fiscal consolidation tends to increase inequality[14], accelerating decreases in wage income shares, and increase long term unemployment. Spending-based fiscal consolidations tend to have larger distributional impacts than tax-based adjustments. Fiscal consolidations are more likely to increase inequality in countries with: (i) higher capital account openness; ii) higher debt-to-GDP ratios; iii) lower skill levels; (iv) higher social expenditure/unemployment rates; and (v) lower tax progressivity. However, adequate design can ensure that the burden of adjustment is shared equitably. For instance, well-designed fiscal adjustments can tap often undertaxed sources such as property and wealth that have the least distortive impact on growth and are most progressive. Although this can generate resistance among influential groups, it should not hurt re-election prospects as long as wealth is more concentrated among the population than disposable income. In the context of a broader decline in spending, fiscal adjustment can still contribute to reducing inequality by targeting subsidies or social programs to the most vulnerable groups. In addition, fiscal policy can favorably influence long-term trends in inequality and growth by promoting education and training among low- and middle-income workers (Woo et al. 2016).

Trade-offs are also presents in the choice between a top-down adjustment or one negotiated with stakeholders. Whether top-down fiscal consolidations are more successful in reaching their stated goals than those done in consultation with stakeholders seems to depend very much on specific country circumstances. Top-down fiscal consolidations can technically be designed to deliver the desired level of adjustment, but they risk coming up against resistance during implementation. Negotiated fiscal consolidations, however, have the advantage of being supported by key stakeholders, but the negotiation process often leads to diluting the most burdensome elements of a fiscal consolidation package, which also tend to be the elements most associated with successful fiscal consolidations. Therefore, a more fragmented- bottom up, fiscal policy making process can make more difficult to arrive at efficient and significant fiscal consolidations (Perotti 1998). Decentralization also raises the question of who carries the cost of fiscal consolidation to the fore. Expenditure cuts typically have well defined "losers," such as civil servants in the case of wage bill measures or transfer beneficiaries where these are being adjusted. Revenue side measures however, especially indirect taxes, tend to be spread out over a large part of the population. In practice, there are examples of successful and failed fiscal consolidations for both approaches (Perotti 1998).

Program-specific consolidations, as opposed to cutting line-items across the board, are politically difficult, but more transparent and less likely to undermine public sector performance. Successful expenditure rationalizations are grounded in a detailed review of the overall public expenditure program to find opportunities for efficiency gains and expenditure reprioritization. Expenditure adjustments that target line items (e.g., travel, investment, salaries) that are not linked to specific public sector outputs and services for a particular group tend to be politically less costly, especially as they can be presented as promoting efficiency gains. However, such broad expenditure cuts risk undermining public sector performance in the medium to long term. Program-based expenditure adjustments that precipitate a reduction in service delivery of

[14] The Gini increases by about 0.3 percentage points two years after the occurrence of a consolidation episode and of about 1.5 percentage points in the medium term (8 years after the occurrence of a consolidation episode).

specific programs tend to be politically more costly as they trigger opposition by program beneficiaries. However, they have the advantage that the implications of expenditure cuts are limited to particular programs and thus are well understood and transparent.

Budget rigidities can constrain the scope for fiscal adjustment. Budget rigidities are institutional, legal, contractual, or other constraints that limit the ability of the government to change the size and structure of the public budget, at least in the short term. There is evidence of this positive association between rigidity and inefficiency of spending, higher spending levels, higher tax rates, and higher public debt (Herrera and Isaka 2024, Figure 2). Munoz and Olaberria (2019) find that relatively high shares of rigid components of public spending (wages, pensions and interests) contribute to getting countries into fiscal distress and constrain fiscal consolidation. Moreover, the effect of rigid expenditure is more relevant for economies with i) high income inequality ii) lower institutional quality and iii) ruled by governments with a low margin of majority.

Higher transparency in budgetary practices can contribute to better fiscal outcomes. Fiscal transparency is essential for keeping fiscal discipline and identifying fiscal risks. Transparency helps prevent actors from hiding incomes, expenditures, and negative fiscal outcomes. Implementing transparency can be challenging, but it has been found to be relevant in delivering fiscal discipline (Alt et al. 2006), controlling corruption, fostering economic development, and even achieving better credit ratings.[15] At the same time, budget fragmentation and lack of transparency have been found to be linked with pro-cyclical fiscal policy (Alesina and Perotti, 1999; Alesina, 2010; Bastida et al. 2007; Debrun and Kumar, 2007; Hameed, 2005)

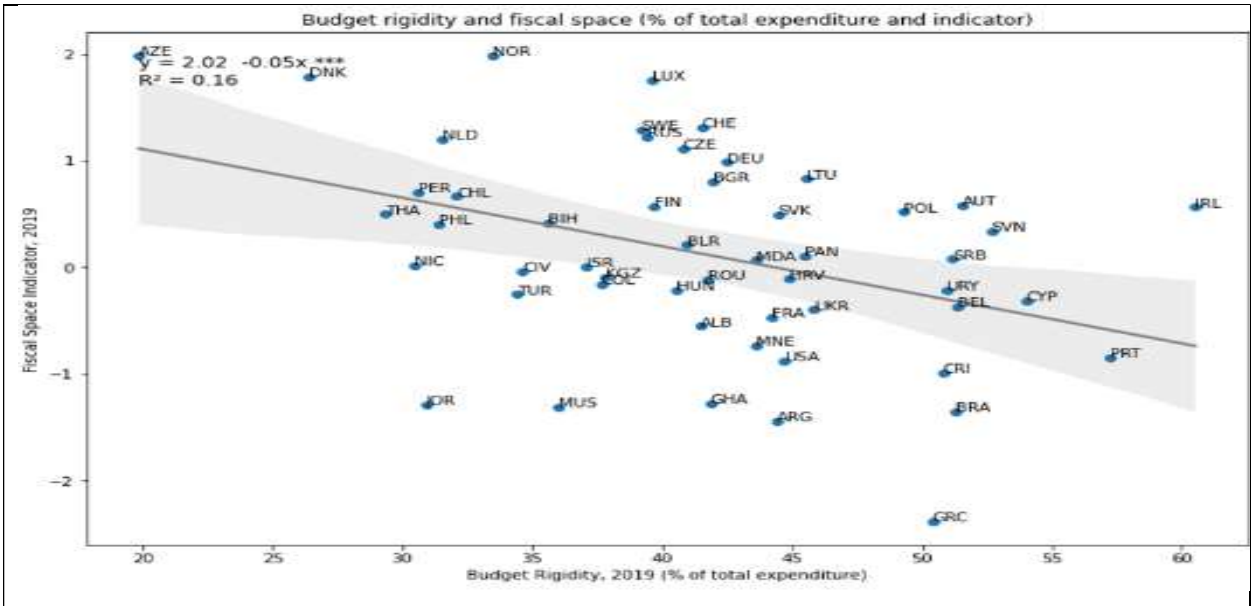
Revising fiscal rules is crucial to ensure a well-defined consolidation strategy that is aligned with the new economic realities. Fiscal rules often require overly rapid adjustment post-crisis, stifling recovery. Evidence from LAC shows an asymmetrical response of compliance to macroeconomic conditions, with the probability of compliance being much lower in case of recession (Ardanaz et al, 2021). It may be preferable a consolidation strategy that explicitly revisits fiscal anchors and allows more gradual adjustment. Increased uncertainty also calls for more ambitious fiscal targets and fiscal space. Revamped fiscal rules should be comprehensive, with debt anchors, operational guides for budgets, escape clauses for flexibility, emphasis on expenditure rules, and enhanced transparency to incentivize compliance (Eyraud et al. 2018). Some proposal is to allow higher deficits for green investments in climate adaptation and mitigation (Cottarelli 2020). However, simulations for a typical EM show that allowing for an extra 2 percent of spending on mitigation on top of a deficit ceiling of 3 percent can lead to unsustainable debt levels or require overly large (non-green) surpluses (around 2.5 percent) (Caselli et al. 2024).

Independent fiscal councils can support the quality of fiscal consolidation. Fiscal councils are associated with reduced forecast errors and deficit bias, and stronger adherence to fiscal rules (Hageman 2010). Patel and Gurazada (2021) find that fiscal councils can play a key role in supporting fiscal consolidation and sustainability, especially if underpinned by strong political

[15] There are many possible reasons why politicians might dislike transparency: rent-seeking politicians are afraid of being disciplined; bad politicians are afraid of being distinguished from good politicians; re-election-minded politicians are afraid they won't be able to generate political business cycles; myopic politicians are afraid they won't be able to run bigger deficits than the public wants.

commitment. They can help provide an independent and public assessment of a government's fiscal policies, plans, and performance based on meeting objectives related to the long-term sustainability of public finances, short-to-medium-term macroeconomic stability, and other official objectives. Some AEs have a long tradition of fiscal councils, their use in many EMDEs increased following the global financial crisis in recognition that they help better manage fiscal risks. By the end of 2021, there were 51 fiscal councils in 49 countries, almost double the number of fiscal councils than 2010 (Davoodi et al. 2022).

Figure 2: Relationship between fiscal space and expenditure rigidity.



Source: Herrera and Isaka (2024)

4. The role of the business cycle and the withdrawal of response measures

A key question for policymakers is to what extent economic recovery alone will take care of restoring fiscal balances. Fiscal consolidation can be achieved through: (i) outgrowing the budget deficit, (ii) withdrawal of crisis response or one-off measures, and (iii) the reduction of the structural deficit.[16] Good fiscal policy is supposed be countercyclical,[17] meaning that consolidation should happen when the output produced by the economy is above its potential level (a positive output gap), or at least it is growing at a faster rate (a closing output gap). The speed of economic recovery and the buoyancy of the tax system are key determinants of the cyclical component of

[16] Annex 1 provides a discussion of the disaggregation of fiscal series into cyclical and structural components.
[17] As is well-known by now, fiscal policy tends to be procyclical (i.e., expansionary in good times and contractionary in bad times) in emerging markets and developing economies (EMDE) and acyclical/countercyclical in advanced economies. See Carneiro and Garrido (2016).

fiscal stabilization. Empirical evidence further shows that consolidation needs to be countercyclical given that fiscal multipliers are larger in recessions than in expansions (Auerbach and Gorodnichenko, 2012), and countries should be careful of embarking on consolidation before exiting from recession[18]. In this way economic recovery contributes to an improvement of the cyclical components of the fiscal deficit and an improvement in the debt to GDP ratio (though the increase in the denominator)[19].

Relying on favorable cyclical conditions to achieve fiscal consolidation, though appealing, can be temporary and inadequate. Growing out of debt without having to do any heavy lifting is the fiscal policy dream. Windfall revenues or lower spending from automatic stabilizers can provide a sense of complacency that may weaken efforts to achieve consolidations. Moreover, the economic and political costs of the consolidation need to be compared with the costs of a delayed fiscal adjustment that can lead to a range of negative consequences, including higher inflation[20], increased debt service costs, and higher risk of debt distress, with significant repercussions on economic stability and growth. Lower fiscal deficits can reduce inflation by reducing the need for inflationary financing. A study on Latin America countries (World Bank 2018) finds that a reduction in the average overall fiscal deficit of 1 percent of GDP is associated with a fall in average inflation of 2.2 percentage points. Based on a panel of 61 developing countries for the period 1969-1998, Patillo et al. (2004) find a strong negative impact of the "debt overhang" on growth, through both physical capital and total factor productivity growth. These findings underscore the importance of timely and effective fiscal adjustment measures to mitigate these risks and ensure sustainable economic development. A balancing act can be a gradual fiscal consolidation, supported by early policy decisions of measures that will take effect gradually to boost the trust in the effort.

After a shock hit, fiscal consolidation requires the difficult decision of choosing the best time to withdraw support measures, which ones to eliminate, and how fast to proceed. Support measures often account for a significant portion of the increased fiscal deficits during crises. As the crises diminish and economic conditions stabilize, the unwinding of these measures becomes a crucial component of fiscal consolidation. The challenge is worsened by the "ratchet effect," as described by Coyne et al. (2022), where countercyclical measures expanded during a crisis tend to persist into the recovery phase, leading to a permanent rise in public spending and government intervention.

The process of unwinding support measures should ideally begin when the initial adverse effects on households and businesses that necessitated the measures have abated. However, deciding the appropriate timing for this phase-out is complex and contingent upon a range of factors. The recent polycrisis, characterized by overlapping crises, has obscured the lines between measures aimed at providing relief from COVID-19, those supporting economic recovery, and those designed to protect the vulnerable from fluctuating and escalating prices. For example,

[18] A meta-analysis shows that no conclusive evidence exists on the effect of economic volatility on long-term growth, although the negative relationship is found to be stronger for samples of developing countries (Bakas et al, 2019). However, several channels through which volatility and growth are related have been identified, such as nominal rigidities, inconsistent or unpredictable policy actions, openness to foreign trade, financial integration, and FDI. Based on the circumstances these different macroeconomic factors can determine a positive or negative relationship, sometimes in a non-linear way (Easterly et al, 2000).

[19] As an example, consider a scenario where a country experiences a boom in commodity prices, leading to increased export revenues and economic growth. This growth in the economy could help reduce budget deficits as increased tax revenues flow into government coffers as well reducing the debt ratio through its denominator effects.

[20] Inflationary finance has been a recurrent way in EMDEs to fill the gap between government revenue and expenditures while limiting borrowing.

Gentilini et al. (2022) report that while 77 percent of pandemic-related programs were phased out by February 2022, with an average duration of just 4.5 months, similar measures were reintroduced or initiated in 2022 to counteract price shocks. The fiscal burden of these measures could have been mitigated if conditions for their phase-out had been established at the time of their introduction, such as sunset clauses or automatic links to triggering factors like food and energy price shocks or high inflation levels. Time-limited measures naturally expire unless extended, making them simpler to terminate than those requiring active repeal. In cases where such design features are absent, political pressures can hinder the withdrawal of popular measures, as Lacey et al. (2021) observed that approximately one-quarter of measures implemented in developing countries lacked a sunset clause, posing a risk of political resistance to their removal.

Phasing out measures does not automatically eliminate all costs, as even discontinued policies may have ongoing costs. Deferred revenue measures, even if temporary, do not guarantee that losses are automatically recouped. Tax administrations with low capacity may struggle to enforce repayment. Extended loss carry-forward policies will leave a dent in revenues for years. Additionally, a period of relaxed standards may erode tax compliance, with long-run implications for revenue. On the expenditure side, one-off expenses, such as an expansion of medical infrastructure, will require higher operations and maintenance expenditure for decades. Loan guarantees do not represent outright costs but contribute to liabilities that the government may need to pay.

Measures introduced as a response to shocks are sometimes stays for too long and become entrenched as their reforms are obstacle by interest groups. Many subsidy programs started out as a means of stabilizing prices to shield vulnerable households from price volatility. However, interest groups can co-opt the program and become strong opponents of reform. Dealing with interest groups requires substantial political will, and this political will can come from a crisis, a moment of high relative political leverage (when rivals are out of power), or by taking advantage of a window of opportunity (e.g., an energy price swing). The case for reform becomes harder to make as benefits become larger or more concentrated, and thus more visible, and when costs stay diffuse and therefore less salient. Case studies suggest subsidy reforms are more viable when benefits are replaced with a credible offer of support policies. Successful subsidy reforms tend to follow administrative and technological reforms which create a better system of social assistance, making an alternative to subsidies credible (Inchauste and Victor 2017).

5. How to design adjustments that reduce the structural component of fiscal balance and minimize negative impacts on the economy

The impact on the economy of structural reduction in deficit depends on the size and the composition of the adjustment strategy. To reduce a structural deficit, governments implement measures aimed at either increasing revenue or decreasing spending in a sustainable manner. As all these measures will have an impact on the economy, this section presents a summary of the findings of the extensive literature on fiscal multipliers. Revenue measures often involve tax reforms, such as closing loopholes, broadening the tax base, or introducing new taxes like carbon or wealth taxes. On the spending side, governments may cut expenditures by restructuring programs, reforming pension systems, while investing in growth-enhancing policies like education and infrastructure that can stimulate economic activity and reduce social spending in the medium-term. Overall, a comprehensive approach that addresses both revenue generation and expenditure reduction is essential for effectively reducing structural deficits and ensuring long-term fiscal health.

The size of fiscal multipliers depends on the structural characteristics of the economies. Using a dataset composed by 44 advanced and emerging economies, Itzaki et al. finds that fiscal multipliers are larger 1) in advanced than in developing countries; 2) under fixed than under flexible exchange rates; 3) in closed than in open economies. Moreover, they are negative in high-debt countries. Batini et al (2014) confirm those results and add other characteristics associated with an increase the multipliers' size such as, labor market rigidities, small automatic stabilizers, and the effectiveness of expenditure management and revenue administration systems.

Theoretically, fiscal consolidation's impact on output depends on whether demand or supply effects dominate. In the simple Keynesian model, reductions in government spending and increases in taxes result in a decrease in aggregate demand and output. In extreme cases, this can result in "self-defeating" fiscal consolidations where the decline in output exceeds the decline in debt and the debt-to-GDP ratio increases (Fatas and Summers, 2016; Aikman et al. 2022). However, it could also be possible for consolidation to lead to non-Keynesian effects with positive impacts on short-run output and growth (Giavazzi and Pagano, 1990; 1996). Supply side and wealth effects tend to dominate if fiscal consolidation is applied to correct an unsustainable fiscal situation with high debt and deficits (Perotti 1998, Rother et al. 2010). In this case, fiscal consolidation will improve the overall economic outlook, which will encourage private sector investment. By lowering interest rates and reducing the expected future tax burden (in the case of spending based fiscal consolidations), private sector wealth increases with positive impacts on private sector consumption and investment.[21]

[21] Numerous studies (e.g., Giavazzi and Pagano 1996, Rzońca and Ciżkowicz 2005, Jha et al. 2014, or Khanfir 2019) show the existence of positive short-term impacts of fiscal consolidation on output and growth. However, de Cos and Moral-Benito (2011) show that the finding of non-Keynesian effects may be due to endogeneity of fiscal consolidation.

There is increasing evidence that protracted and excessively deep consolidations have a long-lasting adverse impact on GDP growth. In the short run, Ardanaz et al (2021) show that in a sample of 44 developing countries and 26 advanced economies, a one percent decline in the cyclically adjusted fiscal deficit results in a decline in output of about 0.4 percent.[22] The World Bank (2022) documents large adverse impacts of the COVID-19 crisis on human capital formation, likely to have adverse growth impacts for many years to come. Countries with limited fiscal space had to curtail capital spending because of additional spending requirements and revenue losses (IMF and World Bank 2021)[23] The cost of corporate credit tends to increase during fiscal consolidations, particularly for small and domestic firms (Ağca and Igan 2013). Klein (2017) also shows that costs of consolidation depend on levels of private indebtedness, with severe contractions observed when private debt is high, but non-significant when private debt is low. Ağca and Igan (2019) further supports these findings, showing that the cost of credit increases during fiscal consolidations, regardless of whether they involve tax hikes or spending cuts.

In terms of composition, expenditure-based fiscal consolidations tend to be less contractionary than tax-based ones, and lead to more persistent fiscal improvements. In a simple Keynesian model, the absolute value of the tax multiplier is smaller than the expenditure multiplier. The reason is that, in the case of a change in government spending, there is an initial change in demand, which leads to a change in output, which leads to a change in income and consumption, and so on. In the case of a change in taxes or transfers, there is no initial change in demand, only a change in disposable income, which leads to a change in consumption, which leads to a change in output, and so on (Blanchard 2017) This would imply that tax-based fiscal consolidations are less recessionary than expenditure-based fiscal consolidations. However, results from empirical research largely carried out for OECD countries suggest the opposite. Based on 17 OECD countries over a 30-year period, Alesina et al. (2015, 2019) conclude that spending-based fiscal adjustments have been associated in many cases with no fall in output at all, as opposed to tax-based fiscal adjustments that can also create recessions and be self-defeating because they do not reduce the debt/GDP ratio. On average, an expenditure-based consolidation plan the size of 1 percent of GDP implies a loss of about 1/4 of a percentage point of GDP and lasts less than two years. In contrast, tax-based plans of the same size on average generate losses of more than two percentage points of GDP and the effect lasts 3–4 years.

There are numerous channels explaining why the GDP response to expenditure-based fiscal consolidation is less contractionary than to tax-based fiscal consolidation. Possible explanations of the greater recessionary impact of tax increases include demand side factors such as: (a) private agents' permanent income drop more from a tax increase than from expenditure cuts[24]; (b) expenditure cuts help to reduce uncertainty for entrepreneurs and thus have a positive impact on private investment; and (c) a fall in both short- and long-term interest rates can crowd in private consumption and investment and potentially yield a net-positive impact of

[22] Comparable results are found by Guajardo et al (2011): a 1 percent of GDP fiscal consolidation reduces real private consumption over the next two years by 0.75 percent, while real GDP declines by 0.62 percent.

[23] The impact of the crises on productivity is less clear cut, though the crises have triggered changes in the way people work, including a shift to home-based working.

[24] Liquidity-constrained consumers may be more numerous during recessions and their consumption will be directly affected by tax increases.

consolidation on output (Ahrend, Catte, and Price, 2006)**.** Negative impacts of higher taxes on the supply of labor may also contribute to more adverse impacts of tax-based fiscal consolidations. At the same time, positive tax multipliers (meaning expansionary tax increase) are often found in studies that uses SVARs methods and cyclically adjusted revenue for, respectively, the identification of exogenous fiscal shocks and the measurement of a tax policy variable under the direct control of the policymaker, Using an alternative approach for measurement, such as an increase in tax rates, Riera-Crichton and al. (2016) shows that the tax multipliers are strongly negative (0.66 on impact and 3.56 after three quarters).

However, in low-taxation countries, gradual fiscal adjustment through raising taxes may be more beneficial than cutting public investment or reducing social transfers. Gunter et al (2021) show that the tax multiplier is zero under relatively low/moderate initial tax rate levels (around 10-12 percent) and increasingly negative as the initial tax rate and the size of the change in the tax rate increase. They also find that the output costs of spending cuts are lower the more gradual is the fiscal adjustment. Hence, low-taxation countries may find it in their best interest to raise taxes as part of a fiscal adjustment rather than cutting public investment or reducing social transfers (particularly to the most vulnerable). Second, the short run output costs of reducing primary spending are also non-linear (i.e., marginal costs increase with the size of spending cuts), which makes a strong argument for gradual versus shock fiscal adjustments.

As large fiscal consolidations require both expenditure and revenue measures, revenue adjustments should focus on the least distortionary taxes and on broadening the tax basis. O'Reilly (2018) suggests that least distortionary taxes should be targeted for increases, for example: property taxes (particularly taxes on immovable property) seem to be the most growth-friendly (least distortionary) followed by consumption taxes and then personal income taxes. Corporate taxes seem to be the most harmful for growth. However, the validity of this "ideal" tax mix has not been confirmed for low-income countries, where they face their own challenges, and tax structures change over time as countries develop (Mcnabb 2018). Dabla-Norris and Lima (2018) found that multipliers based on tax base changes are consistently lower than those based on tax rate changes. Multipliers for rate changes are larger and statistically significant, starting at about -1.2 after one year, and reaching between -1.5 and -2 after two years, depending on the specification. In contrast, multipliers of tax base estimates are not statistically different from zero.

Environmental taxes are associated with low fiscal multipliers and may be an important instrument in a fiscal consolidation package that aims to minimize output losses. Schoder (2021) estimates multiplier effects on output and jobs for a panel of 75 high- and low-income countries from 1994 to 2018. The estimated environmental tax multiplier effects on output range from 1 on impact to 1.8 at the peak. Personal income tax multipliers are slightly higher, ranging from 1.4 to 2.3. While income taxes reduce employment, environmental taxes do not. Consistent with other findings in the literature, Schoder finds that environmental tax multipliers are highly regime dependent: they are close to zero or statistically insignificant unless taxes are increased under the following circumstances: when output contracts, when fuel prices are high, when the environmental tax levels are high, or when the carbon intensity of output is low. Commodity trade-exposed countries face higher tax multipliers.

Within the different spending categories, cutting recurrent expenditures has a less damaging impact on output than cutting investment. Cuts in public investment trigger a decline in private investment and thus in the overall output. Ardanaz et al (2021) show that a one percent fiscal consolidation that relies on cuts to public investment results in a drop 0.7 percent in GDP within three years. In the context of sub-Saharan Africa, Arizala et al. (2021) also find that fiscal consolidations involving cuts in public investment have the largest adverse effect on output.[25] On the other hand, fiscal consolidations that rely on reductions in current expenditure may have no adverse impact on output in the short term and may even have a positive impact on output in the medium term.

When the economy has been hit by a shock, choosing the most effective fiscal instrument to respond to the shock depends also on the origin of the shock. Ghassibe and Zanetti (2022) show that the effectiveness of a fiscal intervention aimed to combat a downturn depends on the nature of the shock. Government spending is effective if the recession originates from a lack of demand as government intervention helps to bring demand closer to supply, but it is ineffective if the recession originates from a negative shock to the supply. This is because an increase in spending will push up prices when supply is low, depressing private consumption. Tax cuts are better for stimulating the economy in response to an adverse shock to the supply of goods as lower taxes stimulate production and help to satisfy demand (they are countercyclical). However, tax cuts are ineffective if the recession results from lack of demand as the production expansion needed to reduce taxes will increase the production of goods that are not in demand and will remain unsold. Therefore, fiscal instruments which stimulate aggregate demand, such as government spending and consumption tax cuts, are countercyclical under demand-driven fluctuations and procyclical under supply-driven fluctuations. By the same logic, it is possible to argue that cutting government spending is less painful under supply driven fluctuations, since it will decrease price levels and stimulate private consumption (through lower prices) and investment (through higher rates of return). Higher taxes can help when there is an excess of supply, as higher taxes can contribute to the elimination of inefficient firms, facilitate input reallocation, and stimulate productivity.

Complementary macroeconomic and structural policies can play an important role. A conducive economic environment during fiscal consolidation, including easing monetary conditions and moderating inflation tends to increase the likelihood of success (Molnár 2012). Most countries are confronted with rising inflation which requires monetary tightening, and the scope for monetary policy to soften the impacts of fiscal consolidation is limited. Fiscal consolidation should be appropriately coordinated and sequenced with the withdrawal of other policy measures to avoid cliff effects and minimize adverse effects from policy interdependencies. Structural policy reforms that foster economic growth can help to offset contractionary impacts of fiscal consolidation**.** Policymakers concerned about the potential impact of fiscal consolidation on output or employment, for example, could prioritize complementary reforms of competition policy, labor policy, and other reforms that aim to support productivity growth.

[25] Dawood and Francois (2017) also conclude that cuts in government consumption rather than investment during fiscal consolidation can crowd-in private consumption.

6. Lessons from past episodes of fiscal adjustments

6.1. Selection and characteristics of the episodes

Different criteria of selection lead to different choices of consolidation episodes in the economic literature. Escolano et al. (2018) (see Annex 4) lists the studies and the definitions used to identify episodes of fiscal consolidation. The studies do bear some similarities, foremost a tendency to use improvements[26] in the cyclically adjusted primary balance (CAPB) as the main determinant of consolidation, although a few use the "policy-action" or "narrative" approach, which finds consolidation episodes by their announcements. Using the primary balance (both cyclically adjusted or not) over the "policy-action" approach has several advantages: (i) it affords a uniform methodology across countries, (ii) it better measures actual execution rather than approved fiscal measures, and (iii) it allows broader coverage of countries and episodes. However, using CAPBs and/or headline primary balances is not without drawbacks: primary balances may capture one-off factors unrelated to policy such as asset bubbles or commodities prices swings; CAPB estimates are subject to many assumptions in the estimation of the output gap; and the sensitivity of revenue and expenditure to the business cycle are derived from the past but may in reality vary over time. To identify consolidation episodes, as well as the impact of fiscal consolidation, we construct a panel dataset of the indicators (listed in Annex 5) and create dummy variables testing whether a consolidation (or success, shock) definition is valid in a given year. Episodes are standardized around time *t* – the first year of consolidation. We primarily use data from the World Economic Outlook because of its broad country coverage (196 countries), especially for EMDEs. The full sample covers 1980–2023. For the three core indicators used to identify the fiscal adjustments (the primary balance, cyclically-adjusted primary balance, and sustainability gap), data coverage is relatively good, especially in more recent years[27].

[26] Some studies look at the levels of primary balance achieved (IMF 2013, Zheng 2014, Eichengreen and Panizza 2014), rather than the improvement of the primary balance.

[27] About 67 percent of country-years for the full sample (and the same share for EMDEs) have observations for primary balance. For cyclically-adjusted primary balances, coverage is 40 percent and starts from 2000 due to the output gap data availability. For the sustainability gap, coverage is about 58 percent.

In this study we find a group of 108 episodes that satisfy simultaneously the four requirements in table 1:

Table 1: Criteria to identify adjustments.

Criteria for Episode Selection	
An improvement in the primary balance	An increase of at least 0.5% of GDP over 2 years and, to account for volatility, a decrease of no more than 0.3% since the previous year[28]
A sustained consolidation	The improvement lasts for at least two consecutive years
A demonstrated policy choice to consolidate	The cyclically-adjusted primary balance is increasing by at least 0.1% year-on-year for at least two consecutive years
A demonstrated need to consolidate	A sustainability gap (headline primary balance is below the debt-stabilizing primary balance) of at least 2 percent of GDP in the year before consolidation begins

Episodes are most frequent in high and lower-middle income countries, and focused predominantly in MENA, ECA, and LAC regions. Forty-four episodes were in high-income countries and 61 in middle-income countries, and only 3 in low-income countries (Figure 3b)[29]. Data availability partly influences these results, as only 40 percent of the country-years for LICs have data for the cyclically adjusted primary balance (in our dataset) since 1990, compared to more than 50 percent for other income levels. This figure is about 66 percent for debt-stabilizing primary balances, compared to 79 percent in HICs. In geographic terms, the distance in the distribution between Europe and Central Asia (32 cases, or 0.64 episodes per country) and SSA (17 cases, or 0.35 episodes per country) is smaller than expected given data availability and) the general absence of strong fiscal frameworks in SSA. Consolidation episodes are usually short-lived. Most episodes (57) lasted for only 2 years; a result consistent with Price (2010). Thirty-four episodes lasted 3 years and some episodes (about 16 percent) lasted at least 4 years[30] (Figure 3m). There is no difference in the length of consolidation between income groups[31].

In terms of distribution over time, two waves of fiscal consolidation efforts are present from 2000 to 2022. It is interesting to compare the timing of these waves of fiscal consolidation with the timing of the three global waves of debt identified by World Bank (2019) since 1990: the first

[28] When choosing between the CAPB or the headline primary balance, the rationale for the CAPB is that it can better isolate episodes where policymakers have made a deliberate effort to consolidate, as opposed to cases in which commodity cycles resulted in a favorable impact on revenue, or when changes in the business cycle impacted the primary balance through automatic stabilizers or expanding tax bases. However, calculating the CAPB is data-intensive – missing data for some required inputs yields CAPB observations for fewer than two-thirds of primary balance observations.

[29] Burundi (2016-18), Chad (2015-18), (Sierra Leone (2017-19).

[30] Factors that tend to lengthen a fiscal consolidation episode reflect the magnitude of adjustment needed (captured by the size of the budget deficit) and monetary conditions supportive of higher economic growth (including a falling inflation rate, a depreciating exchange rate, and reductions in the implicit interest paid on debt).

[31] Escolano et al. (2018) review fiscal consolidation episodes for advanced and developing economies and find that consolidation episodes last between three to four years and tend to be longer in advanced than in developing economies.

started in 1990, the second in 2002, and the third in 2010. The beginning of each wave coincided with periods of low interest rates and significant financial innovation. Interestingly, the number of fiscal consolidations episodes start to increase in parallel with the increase in debt, they peak after five to six years, coinciding with the end of debt waves. The latest waves of fiscal consolidation peaked in 2017, reflecting fiscal consolidation following the global financial crises, and in 2022, at the end of generalized support during generalized support during the pandemic (Figure 3a).

Countries "take their time" before undertaking consolidation, despite unaddressed and growing fiscal imbalances tending to result in wider macroeconomic imbalances. On average, countries wait 3.3 years after a large sustainability gap opens up before starting an adjustment, among countries which adjust at all. However, unaddressed fiscal imbalances[32] fuel debt levels by 23.2 percentage points of GDP in the five years from the moment when the imbalances arise. Moreover, real GDP per capita growth turns negative (-1 percent) in the median country in the year when the imbalance arises and the median throughout the period of unsustainability is -0.8 percent. More generally, average real GDP per capita growth during a prolonged period of unsustainability falls in the 28th percentile of the historical values of each country, on average across episodes. Sustainability gaps are also associated to pressures on the exchange rate and on the current account balance, while inflation is generally lower in those periods, contributing this way to higher debt ratios and thus, everything else being equal, to larger gaps[33].

More than half the episodes were preceded by a shock. Most consolidation episodes (66) were preceded by a rapid build-up of public debt, terms of trade shocks (56), or by below-trend growth (54), the latter capturing all other potential sources of shock (health emergencies, war, conflicts, etc.[34]. Only twenty-five consolidation episodes followed a disaster (23 percent of cases) (Figure 3l). Looking at multiple shocks, only in eight cases consolidation took place after a disaster in a context marked by a growth slowdown. The number of consolidation episodes in countries where debt had already been accumulating is strongly correlated with the presence of shocks; a large debt increase is present in 73 percent of all episodes that followed a terms of trade shock, and 56 percent of all adjustments that followed a disaster.

[32] Unaddressed fiscal imbalances are episodes of consecutive years in which a country does not undertake fiscal consolidation despite a large need to consolidate, defined as before in terms of a sustainability gap above 2 percent of GDP.

[33] On the other hand, prolonged periods of unsustainability are not very frequent. Most episodes are just a single year long. Among consolidating episodes, unsustainability ends after 3.9 years on average. Among cases that don't end in consolidation, unsustainability lasts 1.7 years on average, thanks to the benefits of a cyclical recovery, debt write-off, or one-year increases in the primary balance too brief to meet our definition of fiscal consolidation. Although one might expect consolidation to shorten the duration of unsustainability–and it certainly does–consolidation is associated with longer cases of fiscal unsustainability as it appears countries tend to wait until a problem proves to be lasting before addressing it with serious consolidation.

[34] The fact that consolidation episodes following ToT shocks are more than twice times more frequent than when a disaster hit can be explained by the larger frequency of their occurrence (898 episodes representing 12.6 percent of the years with available data, versus 546 episodes). An additional explanation is that disasters produce sharp and immediate effects on the economy so that in the aftermath of disasters consolidation is usually postponed in favor of a fiscal expansion to accommodate for the emergency and the reconstruction.

Table 2 Criteria to identify shocks

Disasters	Terms of trade shock	GDP per capita growth	Rapid debt buildup
At least one disaster in the 3 years prior to consolidation causing damages greater than 0.5% of GDP (from EM-DAT).	IMF commodity terms of trade index (2012=100) drop by 15 percent or more in at least one of the 3 years prior to consolidation.	A contraction in GDP per capita average growth in the two years prior to consolidation is lower than their historical 70th percentile.	A rapid buildup of debt is defined as an episode where the country's average annual change in debt-to-GDP in the 5 years positive and greater than the country's historical 70th percentile.

The typical consolidation episode is expenditure-based and frontloaded. In terms of spending/revenue composition, 55 percent of episodes were expenditure-based, and 38 percent were revenue-based, with the remaining considered mixed.[35] The analysis by decades show that revenue-based consolidations have ticked up from the 2000s to the 2010s (from 37 to 52 percent) (Figure 3e). Expenditure-based consolidations have been popular in the Europe and Central Asia regions (77 percent) while in Latin America and Caribbeans have been revenue based were the majority (51 percent). Only 22 percent of episodes had backloaded consolidations, while more than 60 percent were frontloaded, the remaining were evenly spread[3637] (Figure 3f). This trend has been decreasing over time, with frontloaded adjustment shifting from 67 percent of the episodes in the 2000s to 60 percent in the 2010s (Figure 3f).

Large improvements in the fiscal balance are achieved by the end of the consolidation episodes. The median change in the primary balance (and in the CAPB) in the first year of an episode is above 2.6 percent, and they improve the following year (and longer) before stabilizing at 4.8 percentage points of GDP (4.5 percentage points for the CAPB) higher by the end of consolidation (Figure 3g). Budget savings (-3 percent of GDP in the first 2 years) are the main driver of the improvement in the headline primary balance. Typical targets for savings are investments in fixed capital (which has been disproportionally affected in emerging and low-income countries) and the wage bill (Figure 3i). In HICs, a significant role was played by social transfers, which reduced by an average of about 0.5 percent of GDP in the first two years of consolidation. It is worth noting that spending typically resumes growing two years after the beginning of consolidation (median value in the third year is 0.13 percent of GDP). Corporate income tax is the main source of new tax revenue, especially in HICs (0.44 percent of GDP over two years) followed by VAT (0.25 percent) and PIT (0.19 percent). In LICs, the main source of new revenue falls under the "other revenue" category (usually SOE dividends).

35 We define revenue(expenditure)-based episodes as those where at least 55% (no more than 45%) of the adjustment happen through revenue (expenditure)-measures, in line with Alesina et al. (2021); episodes with values in between are considered mixed.
36 We define front(back)loaded episodes as those where at least 55% (no more than 45%) of the adjustment happen in the first half of years spent consolidating, in line with Alesina et al. (2021); episodes with values in between are considered spread-out.
37 This result is in line with earlier findings in the literature (Tsibouris et al., 2006; and Baldacci et al., 2004).

Revenue measures become the predominant contributor in prolonged consolidations. Revenue became the main driver of consolidation in countries where primary balances increased for three consecutive years. This may reflect the fact the revenue measure available for immediate adjustment - a hike in tax rates - is the least appealing, politically, and economically. Economic theory explains that it is inefficient finance a short-term need with a *permanent* increase in the tax level. Thus, increasing tax potential, as with increases in statutory tax rates, should be carried out as part of a medium-term fiscal consolidation plan and not a short-term adjustment. Moreover, tax revenue will start to flow more robustly after the short-term impacts of the consolidation have been absorbed and the space to achieve further savings diminishes progressively.

Public debt typically stabilizes at 1.8 percentage points of GDP higher than before consolidation. The large movements in the fiscal balance produce a slowdown in the pace of debt accumulation with the median cumulative movement in the debt level falling from a 9 percentage points of GDP increase in the two years prior to consolidation to an increase of around 1.8 percentage points of GDP in the first two years of adjustment (Figure 3h), followed by stabilization. The trends in debt creating flows show that, for the average country, during the first-year primary balances are still negative and require more borrowing. In addition, a large contribution of nominal growth to debt reduction (an average of six ppt of GDP in the first two years, well above the level of nominal interest rates) is of great importance. (Figure 3k).

6.2. What characterizes successful adjustments?

A large set of criteria (Table 3) are used to identify successful adjustments. Most of the definitions of success used in the empirical literature follow (with some modification) the definition introduced by Alesina and Aldagna (1998): a period of tight fiscal policy is successful if (1) in the three years after the tight period, the ratio of the cyclically adjusted primary deficit to GDP is on average at least 2 percent of GDP below its value in the year of tight policy, or (2) three years after the tight period, the ratio of the debt to GDP is 5 percent of GDP below its level in the year of the tight period. Some studies look at the level while other at the change achieved in the primary balance[38]. We control also for the effects of consolidations on other welfare indicators, in conjunction with the first criteria.

Table 3: criteria to identify successful adjustments.

Sustainability gap	The primary balance at the end of consolidation is greater than or equal to the debt-stabilizing primary balance.
Debt-to-GDP	The debt-to-GDP level at the end of consolidation is no higher than in the year prior to consolidation.
Real GDP per capita growth	Average annual GDP per capita growth during consolidation is at least 100% of its average annual level in the 10 years prior to consolidation.
Poverty	At the end of consolidation, the poverty headcount ratio ($2.15 a day, 2017 PPP) is not higher than the year prior to consolidation.

[38] See Escolano and other (2018) for a review of the definitions of success.

Inequality	At the end of consolidation, the Gini coefficient is not higher than the year prior to consolidation.

Fiscal adjustments were more successful in stabilizing the debt-to-GDP (fiscal sustainability) than in reducing it (creating new fiscal space), especially in EMDEs. Adjustments were able to bring the primary balance to a level greater than or equal to the debt-stabilizing primary balance (first criteria in Table 2) in 69 percent of cases. The rate of success was particularly high in EMDEs (77 percent) than in HICs (57 percent). It is worth noticing that what characterizes unsuccessful episodes in the HIC group was not the change in primary balance (that was even higher than under successful cases) but a slower economic growth. In HICs there is a difference of 3.1 percent in the average rate of per capita growth recorded from the two years before until the end of the consolidation between successful and unsuccessful episodes, while this same difference is 0.9 percent in EMDES (Tables 6a and 6b). These can be related with the predominant role of revenue increase that, as have already highlighted, may have a high negative impact on output. In EMDEs in contrast unsuccess is also due to a lack of ambition, as the primary balance improved by only two-thirds of what happened in successful cases. Moreover, in both income groups only in 41 percent of the cases primary balance reached the level required to put debt on a declining path[39] (second criteria) (Figure 4a and 4f). Here the relative high rate of success of HICs was due to a higher fiscal effort strongly driven by large savings. However, in almost all cases, consolidation brought debt below the level it would have reached based on the trend growth of debt accumulation in the years before consolidation. Furthermore, most countries (35 out of 44 episodes) which successfully decreased debt during consolidation maintained some of those gains two years after consolidation.

Moreover, chances of fiscal consolidations harming the economy, or directly harming the population are non negligeable. Results show that conditioning success on the dynamics of non-fiscal variables, in addition to achieving debt stabilization, leads to a sharp decline in the rate of successful episodes[40] (Figure 4b). When the definition of success is expanded to non-fiscal macro variables, we see that the improvement in the primary balance necessary to stabilize the debt ratio is associated with an average annual per capita growth below its 10 years average annual performance in as many as 64 percent of the cases. Analysis of the impact on poverty and income distribution is affected by large data gaps but, where data exist, we found that only in a third of the cases consolidations were not associated with a worsening of pre-existing poverty and income distribution situations. While readers are free to interpret these data according to their preferences and beliefs on how much growth or equality is acceptable to foregone in order to restore fiscal space, the data show that the improvement in the primary balance when poverty and inequality indicators were preserved, although is lower than under any other criteria, can be judged as still high in absolute terms (above 4 percent), and relatively to unsuccessful episodes (Table 8a and 9a).

[39] Moreover, in three cases countries were able to bring the debt back to the level prior to the consolidation without simultaneously closing the primary gap, pointing to the role of other factors such favorable stock-flow adjustments.

[40] This is particularly relevant in EMDEs where the rate of success moves down from 78 percent, when the only criteria considered is the elimination of the sustainability gap, to 36 percent when we add the preservation of the long-term growth trend.

Consolidations taking place after the economy has been hit by a terms of trade shock are rarely successful. Only 23 percent of consolidation episodes established after terms of trade shocks managed to stabilize debt while preserving growth trends, a result statically inferior to the consolidation episodes not preceded by such shocks (Table 4). Being preceded (or not) by one of the other two types of shock or by a debt build-up does not have a statistically significant impact on success instead. Moreover, only less than twenty percent of consolidations that follow a terms of trade shock manage to avoid worsening poverty or inequality, in contrast to around 60 percent in a no-shock situation. The results are similar across consolidation episodes established in the aftermath of other shocks or a build-up of a debt.

Table 4 Consolidations' success after shocks

	Shock	**Success**[41]		
Type of shock		**Y**	**N**	**%**
Debt Buildup	Y	26	40	39.0%
	N	13	29	31.0%
Low Growth	Y	21	33	39.0%
	N	18	36	33.0%
Disaster	Y	10	15	40.0%
	N	29	54	35.0%
ToT	Y	13	43	23%***
	N	26	26	50%

We find confirmation that expenditure-based adjustments are more successful than revenue-based in restoring fiscal sustainability, and they are also more growth-friendly, especially in high-income countries. Evidence confirms that expenditure-based consolidation is significantly more successful than revenue-based consolidations when the only goal is to stabilize the debt level (83 percent versus 49 percent) (Table 5). It is also more likely to be successfully executed without harming the economy, with a statistically significant difference of 27 percentage points[42]. Revenue-based consolidations tend to cause a deterioration in the poverty rate, as they are successful in only 14 percent of cases, which is 32 percentage points lower than expenditure-based consolidations. The same holds for their impact on poverty (14 versus 46 percent) and inequality (14 versus 39 percent). As these results are driven by outcomes in HICs and cannot be applied to EMDEs, they also seem to contrast with the idea that impact on income inequality of revenue-based consolidations is lower (or even negative) in countries (typically HIC) where tax

[41] Success defined as debt stabilization.

[42] This result is in line with the findings from Ziogas and Panagiotidis (2021). However, contrary to their other findings our data do not show that fiscal consolidations launched in a weaker economic situation prior to the start of the consolidation effort tend to result in more successful fiscal consolidations – defined either as stabilization or reductions in the debt-to-GDP ratio.

systems are more progressive.[43] Of the 25 HICs with Gini index data from consolidation years, all eight episodes of revenue-based consolidation were accompanied by an increase in inequality, while inequality increased in eight out 15 cases of expenditure-based consolidations. This might indicate that when there is sufficient capacity at the administrative level is possible to implement well-targeted savings that do not necessarily worsen income distribution, even when they privilege social transfers[44], but that the tax increases were not targeted towards high income-earners or wealthy people.

Table 5 Consolidation composition and rate of success

Consolidation Type	**Success in Stabilizing Debt (A)**	**(A) + Success in Preserving Growth**	**(A)+ Success in Preserving Poverty Rate**	**(A)+ Success in Preserving Inequality**
Expenditure-based	83%***	47%***	46%***	39%*
Revenue-based	49%	20%	14%	14%

Prolonged efforts (2+ years) help bring the primary balance to a level that stabilizes public debt. The rate of success for consolidations aimed at closing the sustainability gap increases over time, from 67 percent when the adjustment lasts for 2 years, to 93 percent for a 4-year episode (Figure 4c). In the same vein, the capacity to return the debt to the level recorded before consolidation increases from 37 percent to 43 percent. The negative impact on growth also seems to soften when the episodes last three or four years (Figure 4d). For most episodes, improvements in primary balances achieved during fiscal consolidation were partly but not fully reversed in the two years following the fiscal consolidation episode[45] (see Figure 4e).

Finally, for robustness control purposes we check how results change once the condition on the sustainability gap is dropped. This criterion implies that results are conditional on fiscal consolidations done in high need, which can be correlated with a country having debt issues at that moment. Ilzetksi et al (2013) find that fiscal multipliers can be zero or negative under high debt situations, therefore conditioning the outcomes of fiscal consolidation done under those circumstances. When the criterion on the sustainability gap is dropped, the number of identified episodes almost double (from 108 to 202). However, the rate of success in terms of avoiding an impact on the growth trend only slightly improves, from 47 percent to 53 percent, while the impact on poverty and income distribution remains overall stable. Finally, no statistically significant evidence could be found that i) high (higher that historical median) inflation supports successful consolidation by facilitating expenditure cuts (in terms of GDP) through keeping nominal

[43] The difference in the rate of success of revenue vs. expenditure-based consolidations is not significant in UMICs and LMICs.

[44] Opposite results on the relations between composition and inequality are reported by IMF (2014)

[45] Measuring by primary balance, the backsliders which fully wiped out the gains of consolidation are Australia (2015-2017), Belize (2016-2018), Botswana (2002-2006), Dominica (2014-2016), Montenegro (2012-2014), North Macedonia (2014-2018), Papua New Guinea (2014-2018), Portugal (2005-2007), Russia (2016-2018), Sri Lanka (2015-2018), Suriname (2016-2018), and Tunisia (2017-2019).

expenditures constant as real expenditures fall and, ii) consolidation episodes generate positive effects on private investment, whereas a typical model indicates that excess savings generated by the government from fiscal consolidation should go into investment via credit.

Overall, the findings suggest that episodes of fiscal adjustment have the following characteristics: 1) the need to restore fiscal and sustainability after years of debt build-up was the most frequent explanation for starting fiscal adjustment, although there are many examples of correction in response to the impact of exogenous shocks, and terms of trade in particular; 2) adjustments were more successful in bringing the primary balance to the debt-stabilizing primary than in reducing debt/GDP ratio, especially in EMDE; 3) however, improvements in variables more directly connected to wellbeing such as per capita growth and poverty are less consistent; 4) consolidations undertaken following adverse terms of trade shocks are significant less successful; 5) expenditure-based adjustments are more successful in restoring fiscal sustainability and promoting growth.

7. Conclusions

This study draws the main lessons on fiscal adjustments to advise policymakers who want to use fiscal adjustments to build fiscal space. It presents the finding of a new analysis of 108 adjustment episodes of fiscal consolidation. Despite most countries embarking on fiscal consolidation after three or more years have passed since the appearance of a large gap between the primary balance and its debt-stabilizing level, fiscal adjustments have been mostly successful in restoring fiscal sustainability, by stopping debt accumulation in 69 percent of cases, but less successful in creating new space since debt start to decrease only in 41 percent of cases, and that happened mainly in HICs, also with the support of favorable economic conditions. The improvements in the primary balance required to at least stabilize debt often led to per capita growth below the long-term average, and they also deepened poverty and income inequality. However, protracted large levels of sustainability gaps also contribute to internal and external balances. Consolidations following adverse terms of trade shocks were rarely successful. Expenditure-based consolidations were more common and more successful than revenue-based consolidations according to a range of criteria.

Successful consolidations need to be timed for the right stage in the business cycle and politically well-managed. A favorable economic environment was a key determinant of debt stabilization, especially in HICs. Waiting until a crisis hits or may force to begin consolidation too late. Consolidation may be necessary to stabilize debt as well as build fiscal space for growing investment needs, but such consolidation is prone to harming vulnerable segments of society and so will require carefully designed concurrent measures to mitigate adverse impacts. Moreover, even "ideal" policy mix have tradeoffs and will face political backlash. Enacting them requires a strong political will and places a high premium on navigating political economy challenges before, during and after consolidation. Therefore, the best policy remains creating the conditions in normal (and even more importantly in good) times to prevent an abrupt, pro-cyclical, adjustments, while not exhausting all the buffers in bad times. This can be achieved by focusing on maintaining sustainable levels of debt in the long term through strong fiscal frameworks.

It is important to aim to strike a balance between improving the fiscal balance and promoting economic growth. Since putting public finance on a lasting sound footing often requires adjusting the discretionary component of public finance. The negative impact on per capita growth observed in many cases suggests the need for careful consideration of the timing and magnitude and composition of fiscal adjustments. Since protracted consolidations have been more successful in closing the sustainability gap but have had negative effects on poverty and inequality indicators, the social impact of prolonged fiscal adjustments should carefully be considered and mitigate by measures especially targeted on vulnerable populations.

Further research is needed to identify the factors that contribute to the success or failure of fiscal consolidation in shifting the trajectory of debt levels, including the role of the business cycle. More analysis is needed to determine the long-term effects of fiscal adjustments on per capita growth, poverty, and income inequality. These studies should consider the counterfactual scenario of no adjustment, where a steady accumulation of debt could eventually hinder productivity and long-term growth, it could also divert budget resources from development spending, hurting the poor even more. Further investigation is also needed to understand why consolidations that follow adverse terms of trade shocks are less successful.

Figure 3

Figure 3a. Two waves of fiscal adjustments were identified over the period 2020-2022 through an improvement in the primary balance.

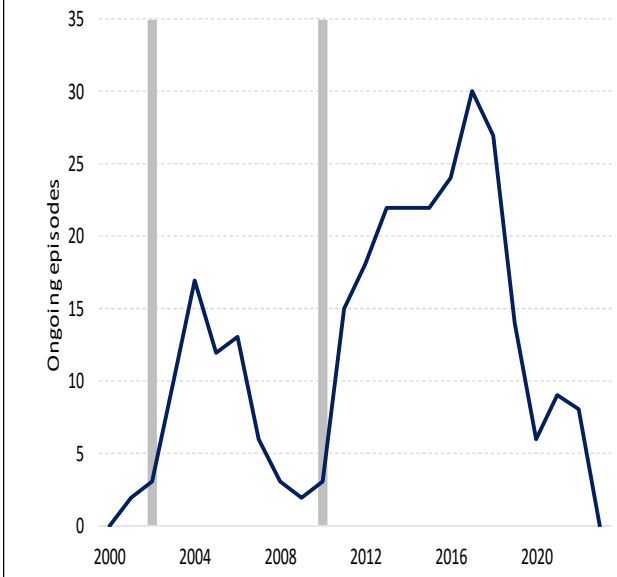


Figure 3b. Episodes (narrow definition of 108 episodes) are most frequent in high- and lower-middle income countries, but focused predominantly in MENA, ECA, and LAC regions.

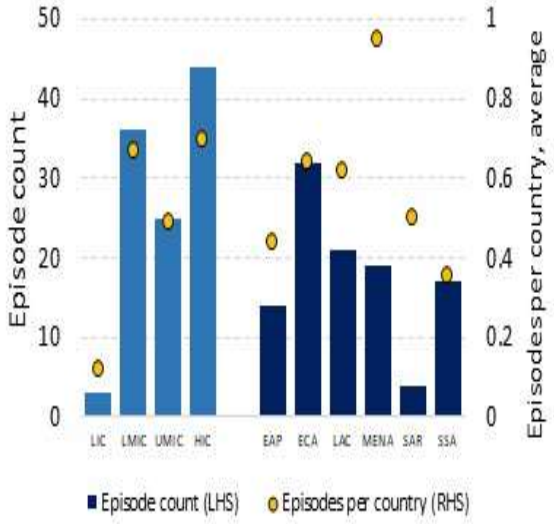


Figure 3c. Consolidation episodes start on average more than three years after the presence of a sustainability gap, among cases which consolidate

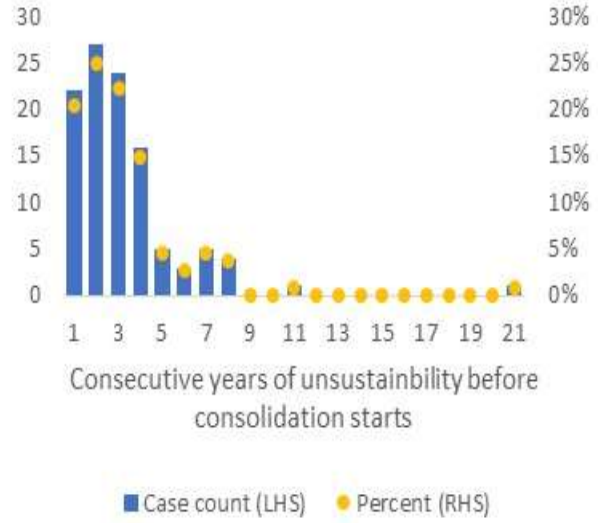


Figure 3d. During a period of consecutive years with a large sustainability gap, in most cases, a country's average GDP per capita growth is lower than their historical average

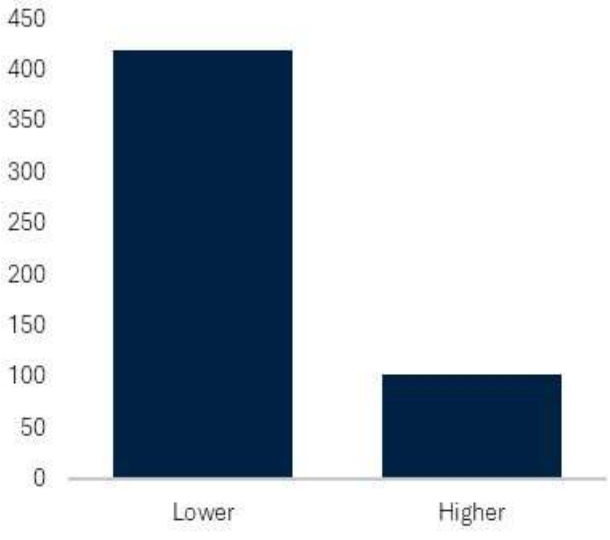


Figure 3e. Majority of the 108 consolidations episodes have been based on spending cuts...

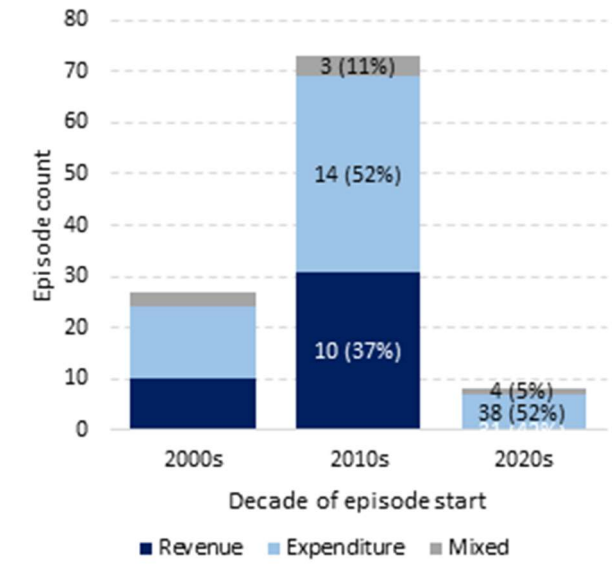


Figure 3f... and with frontloaded measures.

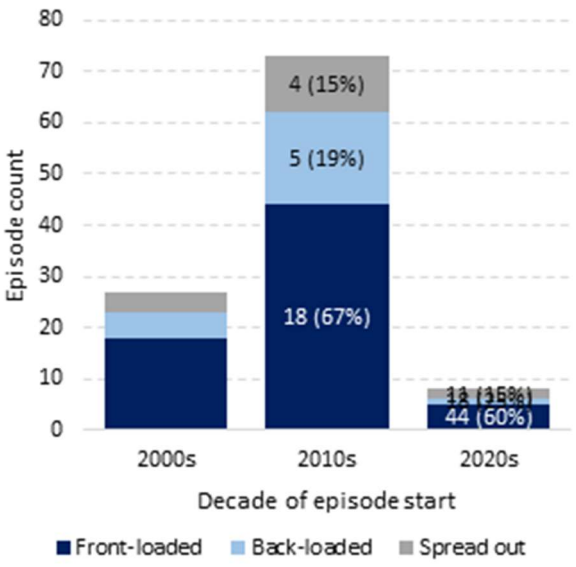


Figure 3g. the headline primary balance typically improved by 2.6 percentage points of GDP in the first year of consolidation.

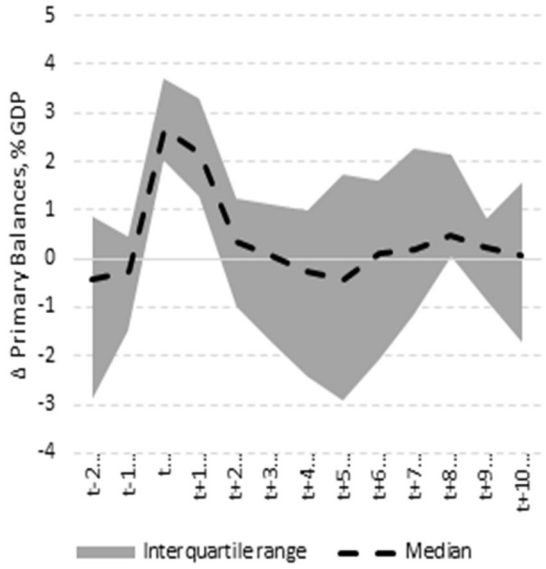


Figure 3h. Public debt typically stabilizes at 1.8 percentage points of GDP higher than before consolidation.

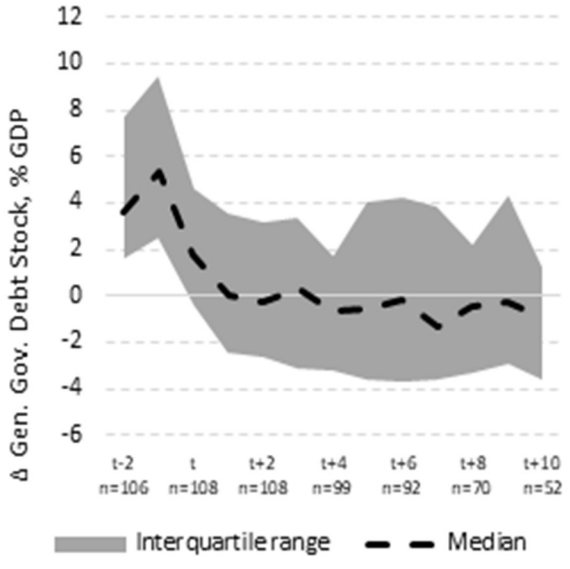


Figure 3i. Typical targets for short-term savings are investments in fixed capital.

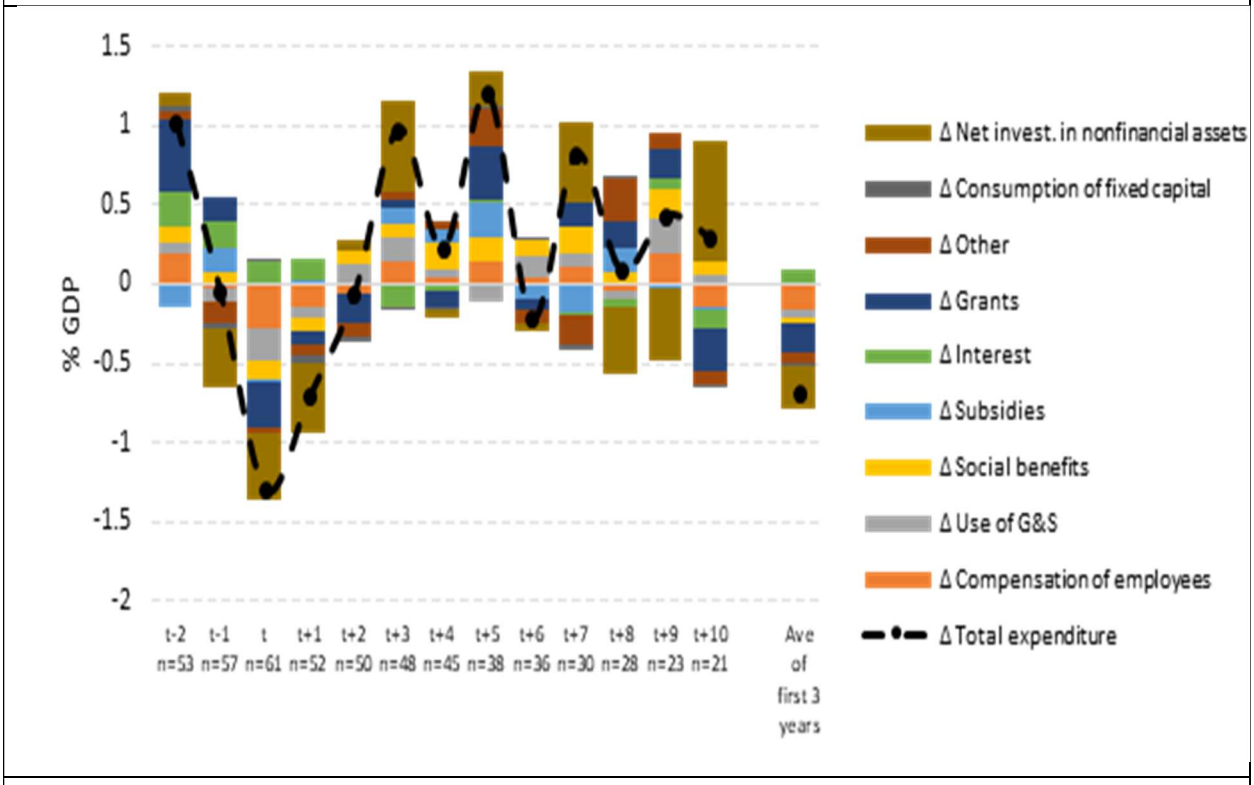


Figure 3j. Corporate Income Tax is the main source of new tax revenue.

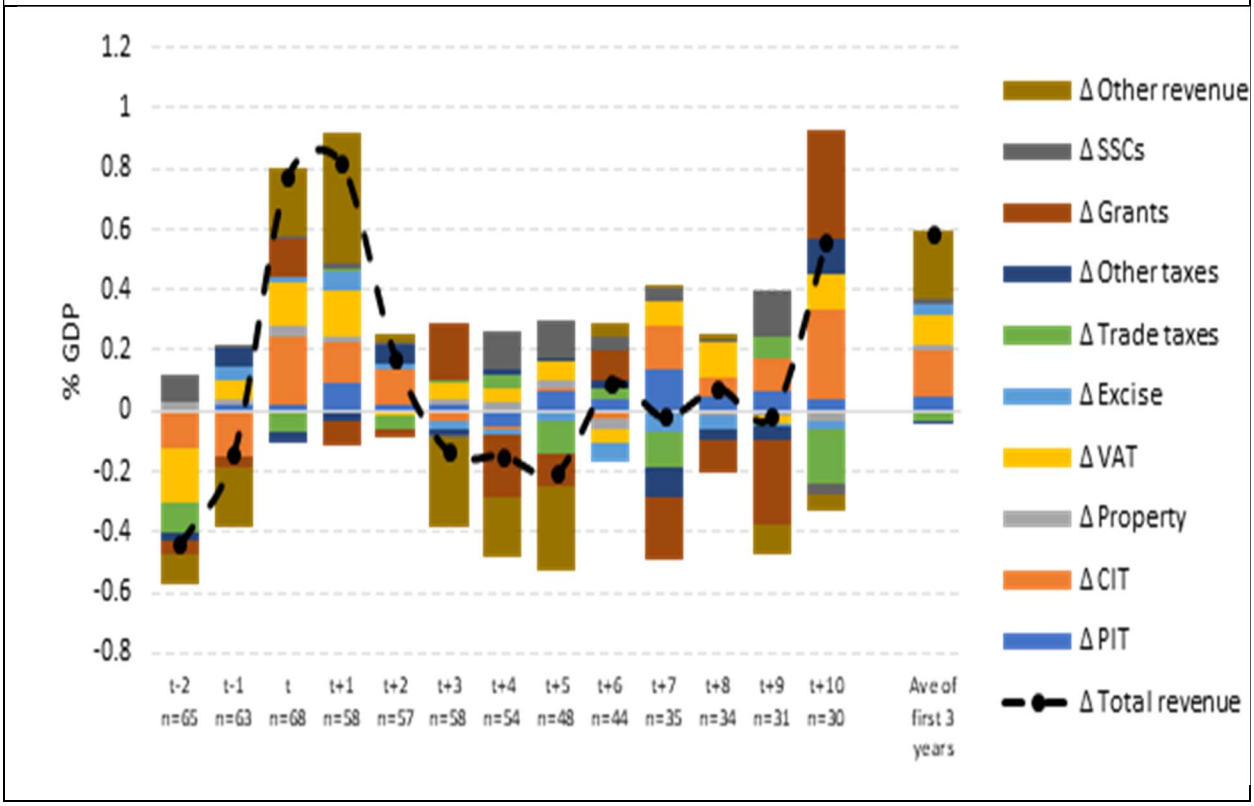


Figure 3k. Debt-creating flows (narrow definition).

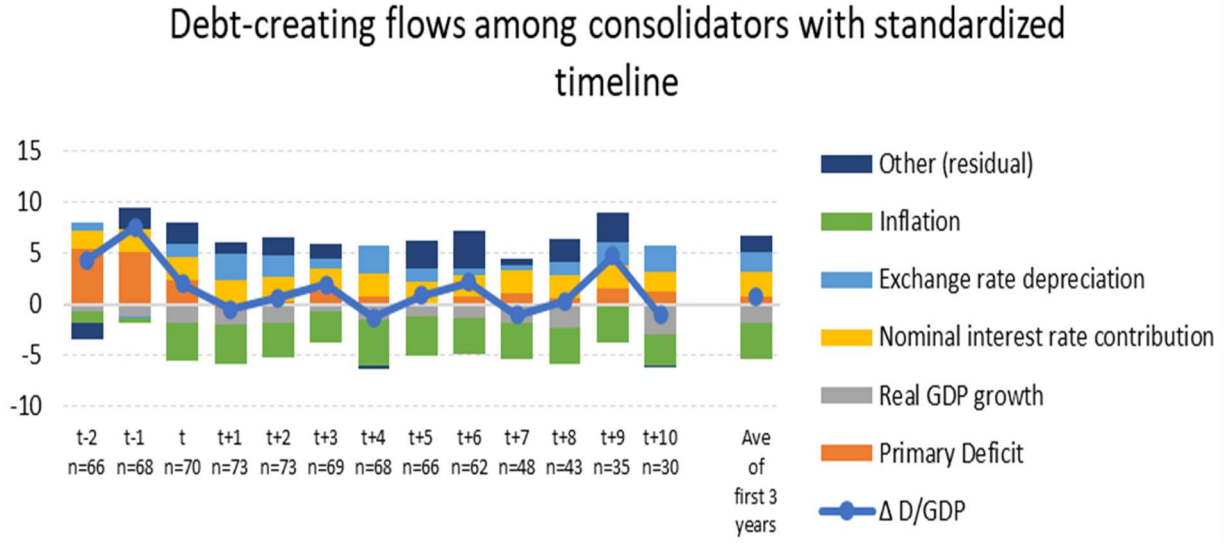


Figure 3l. More than half the episodes were preceded by an economic shock.

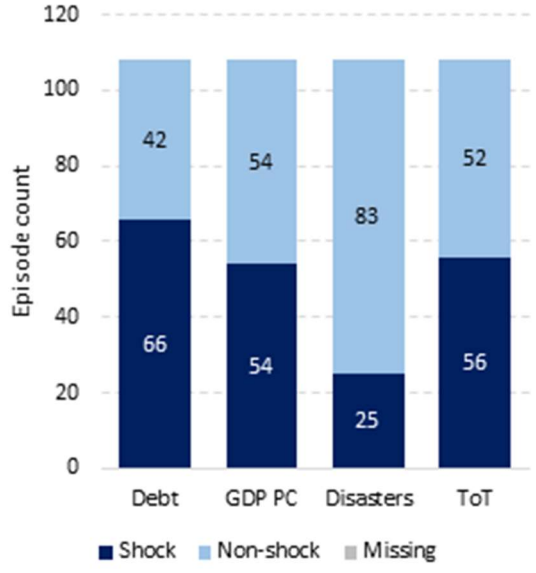


Figure 3m Consolidation episodes are usually short-lived.

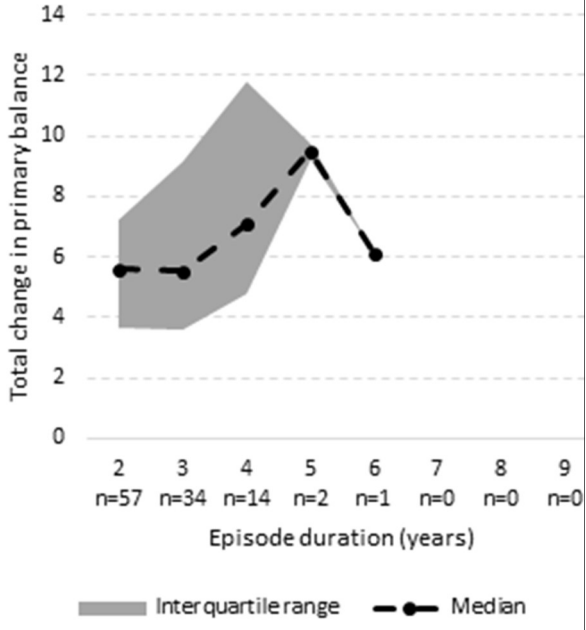


Figure 4

Figure 4a. Rates of success vary according to the criteria used.

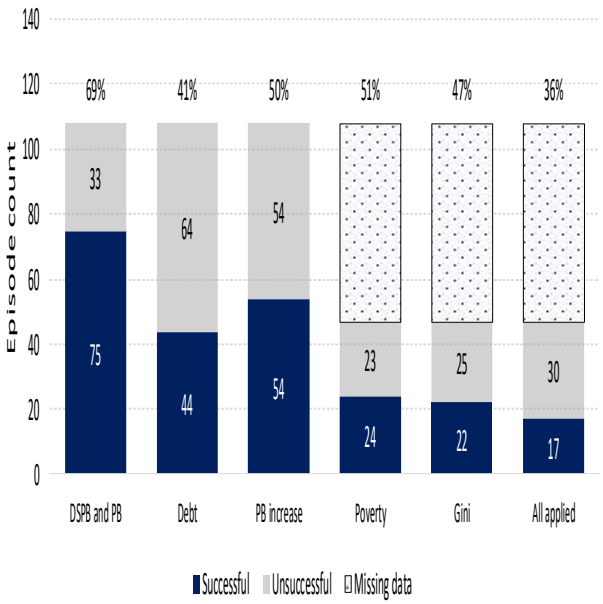


Figure 4b Achieving multiple types of success is less common.

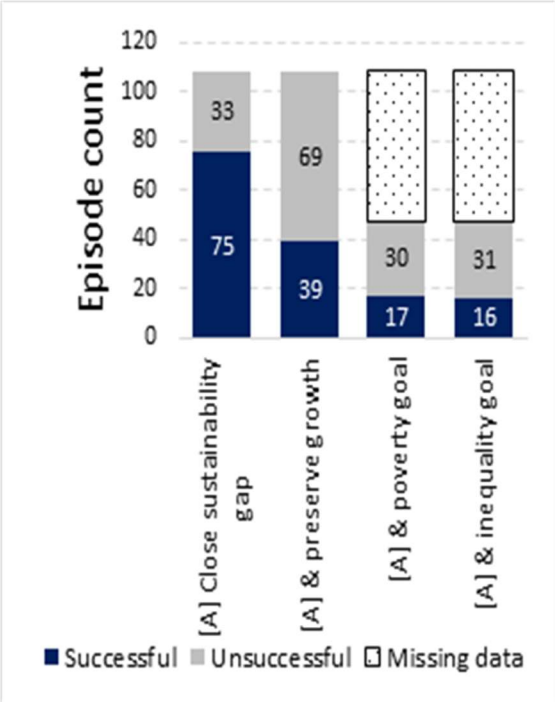


Figure 4c Rate of success for consolidations aiming at closing the sustainability gap increases over time.

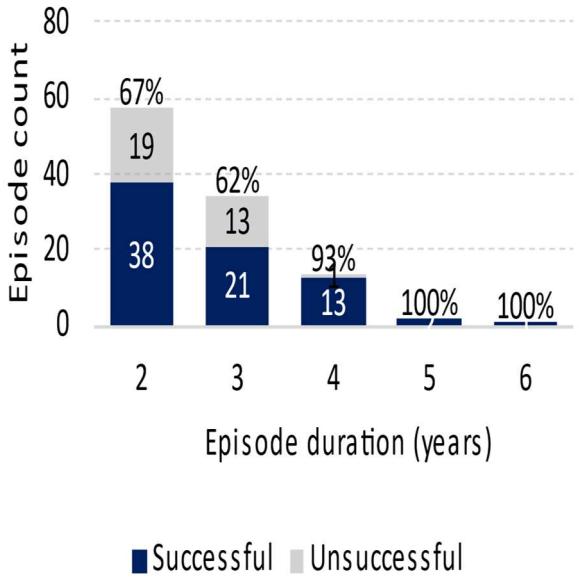


Figure 4d Included when controlling for the impact on growth.

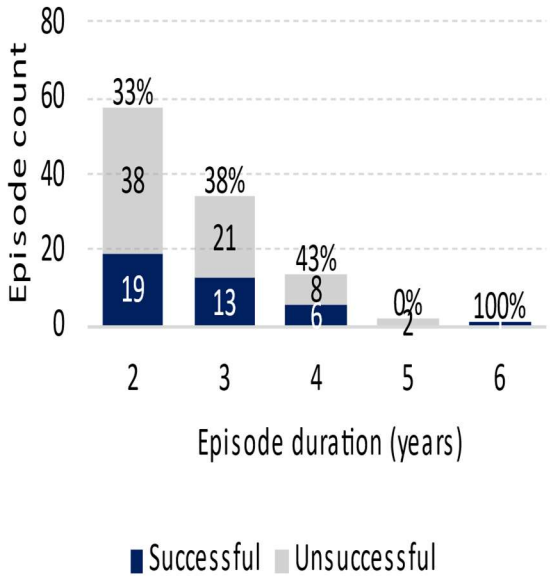


Figure 4e Backsliding erased some of the gains of consolidation in the primary balance, but usually not all of it.

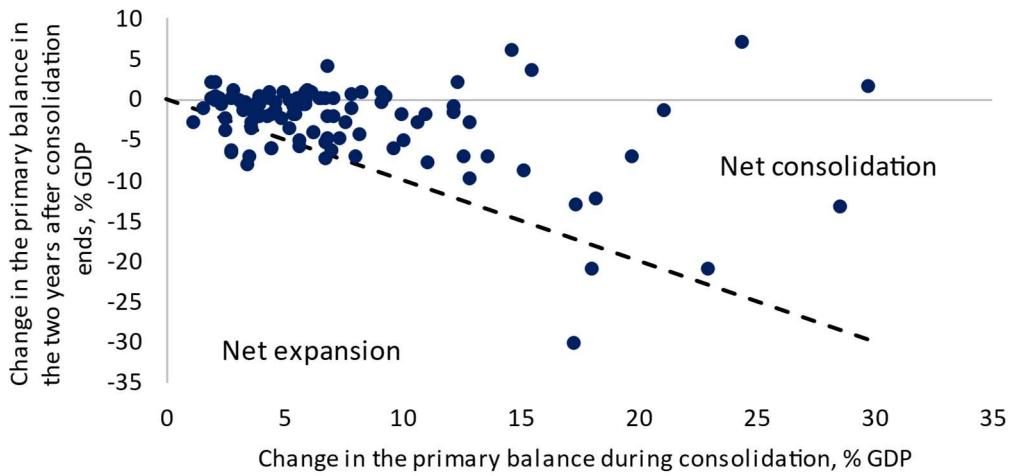
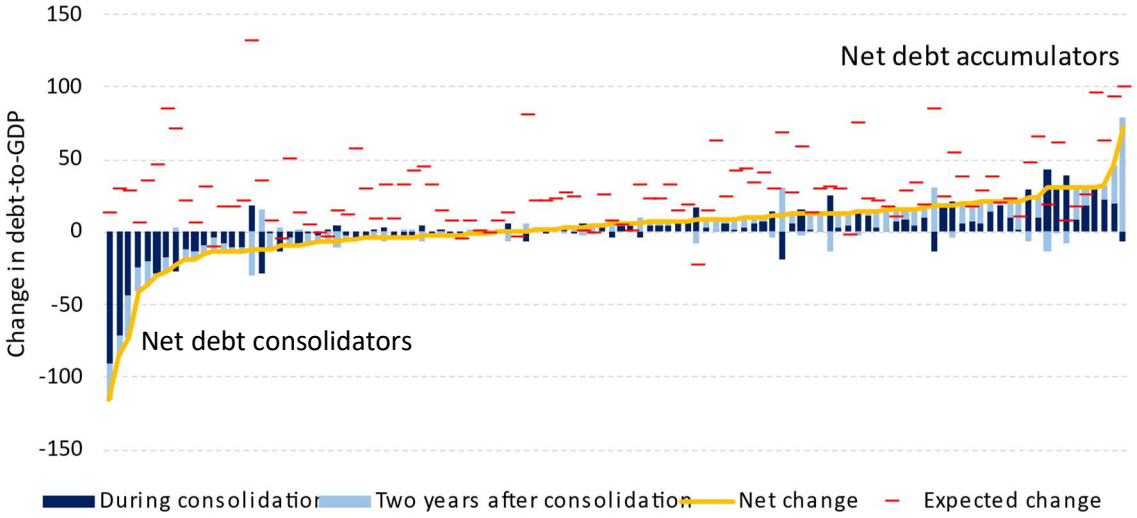


Figure 4f Debt increased for most consolidators, but not as much as without consolidation



Note: expected change shows where debt-to-GDP would have been in the counterfactual case that assumes that the rate of accumulation of debt in the two years prior to consolidation would have continued.

Table 6a (median values)

Success defined as closing the sustainability gap.

		No. Obs	Expenditure Based Obs	Revenue Based Obs	Mixed Obs	Frontloaded Obs	Backloaded Obs	Mixed Obs	Δ Primary Balance[a]	Δ Primary Expenditure[a]	Δ Revenue[a]
All	Successful	75	49***	20	6	41	19	15.0	6.0	-3.8	2.2
	Unsuccessful	33	10	21	2	26	5	2.0	4.6	-2.2	2.4
HICs	Successful	25	19	3	3	14	5	6.0	5.0	-3.8	1.1
	Unsuccessful	19	4	14	1	16	2	1.0	5.8	-2.6	3.2
EMDEs	Successful	50	30	17	3	27	14	9.0	6.2	-3.6	2.6
	Unsuccessful	14	6	7	1	10	3	1.0	4.0	-2.2	1.9

*as percent of GDP ***P-value <0.01*

Table 6b (median values)

		Successful episodes[a]			Unsuccessful episodes[a]		
	TOTAL	Before	During	After	Before	During	After
All	GDP per capita growth	0.8	2.3	2.1	-0.1	1.0	1.5
	Δ Debt to GDP	9.7	-0.7	0.3	11.1	7.0	2.3
	Δ Current account balance	0.1	2.2	-1.1	0.4	0.8	0.5
HIC	GDP per capita growth	0.8	1.9	2.0	-1.0	0.6	1.5
	Δ Debt to GDP	8.4	-1.5	-1.8	14.0	8.9	2.6
	Δ Current account balance	-0.3	2.2	-0.8	1.1	0.8	0.1
EMDEs	GDP per capita growth	0.9	2.6	2.3	1.0	1.6	1.8
	Δ Debt to GDP	11.8	0.3	1.7	9.9	4.9	1.9
	Δ Current account balance	0.1	2.2	-1.4	-0.2	0.7	0.8

Before = t - 1 and t - 2; During = years of consolidation; After = last year of consolidation + 1 and last year of consolidation + 2

Table 7a (median values)

Success defined as closing the sustainability gap without reducing GDP growth.

		No. Obs	Expenditure Based Obs	Revenue Based Obs	Mixed Obs	Frontloaded Obs	Backloaded Obs	Mixed Obs	Δ Primary Balance.	Δ Primary Exp.	Δ Revenue
All	Successful	39	28***	8	3	19	9	11	6.1	-3.6	2.5
	Unsuccessful	69	31	33	5	48	15	6	5.3	-3.0	2.3
HICs	Successful	17	14***	2	1	9	3	5	6.8	-5.7	1.1
	Unsuccessful	27	9	15	3	21	4	2	5.8	-2.6	3.1
EMDEs	Successful	22	14	6	2	10	6	6	5.8	-3.2	2.7
	Unsuccessful	42	22	18	2	27	11	4	5.4	-3.5	1.9

Table 7b (median values)

		Successful episodes			Unsuccessful episodes		
		Before	During	After	Before	During	After
All	GDP per capita growth	0.7	3.1	2.3	0.6	1.0	1.4
	Δ Debt to GDP	7.9	-3.1	-1.1	11.7	5.1	2.4
	Δ Current account balance	0.6	1.8	-0.6	0.1	2.0	-0.1
HIC	GDP per capita growth	0.5	2.3	1.7	-0.6	0.9	1.6
	Δ Debt to GDP	8.5	-3.6	-1.2	11.5	6.2	0.6
	Δ Current account balance	0.6	2.2	-0.8	0.3	0.8	0.1
EMDEs	GDP per capita growth	0.7	3.8	2.5	1.1	1.1	1.0
	Δ Debt to GDP	7.6	-2.8	-0.7	11.8	4.4	3.0
	Δ Current account balance	0.4	0.2	0.4	-0.1	2.9	-1.2

Before = t - 1 and t - 2; During = years of consolidation; After = last year of consolidation + 1 and last year of consolidation + 2

Table 8a (median values)

Success defined as closing the sustainability gap without increasing poverty.

		No. Obs	Expenditure Based Obs	Revenue Based Obs	Mixed Obs	Frontloaded Obs	Backloaded Obs	Mixed Obs	Δ Primary Balance.	Δ Primary Exp.	Δ Revenue
All	Successful	17	13**	2	2	11	3	3	4.7	-3.6	1.1
	Unsuccessful	30	15	12	3	17	8	5	4.4	-2.6	1.8
HICs	Successful	7	7***	0	0	5	1	1	4.9	-3.8	1.0
	Unsuccessful	18	8	8	2	10	4	4	4.4	-2.4	2.0
EMDEs	Successful	10	6	2	2	6	2	2	4.8	-2.9	1.9
	Unsuccessful	12	7	4	1	7	4	1	4.5	-2.8	1.7

Table 8b (median values)

		Successful episodes			Unsuccessful episodes		
		Before	During	After	Before	During	After
All	GDP per capita growth	0.8	3.0	3.1	0.4	1.1	1.7
	Δ Debt to GDP	10.4	-1.4	-1.1	10.9	4.5	2.0
	Δ Current account balance	2.0	1.0	-0.6	0.9	1.8	0.2
HIC	GDP per capita growth	-1.1	2.3	3.1	0.9	1.0	1.5
	Δ Debt to GDP	8.5	-1.4	-5.5	9.7	6.1	0.0
	Δ Current account balance	1.8	1.0	-0.6	1.5	1.6	0.5
EMDEs	GDP per capita growth	1.6	3.5	2.8	-0.1	2.1	2.6
	Δ Debt to GDP	11.1	-1.1	0.3	11.3	2.8	2.6
	Δ Current account balance	2.4	1.7	0.7	0.5	3.1	0.1

Before = t - 1 and t - 2; During = years of consolidation; After = last year of consolidation + 1 and last year of consolidation + 2

Table 9a (median values)

Success defined as closing the sustainability gap without increasing inequality.

		No. Obs	Expenditure Based Obs	Revenue Based Obs	Mixed Obs	Frontloaded Obs	Backloaded Obs	Mixed Obs	Δ Primary Balance.	Δ Primary Exp.	Δ Revenue
All	Successful	16	11*	2	3	8	5	3	4.1	-2.9	1.2
	Unsuccessful	31	17	12	2	20	6	5	4.4	-2.7	1.7
HICs	Successful	8	7***	0	1	4*	3	1	3.9	-2.9	1.0
	Unsuccessful	17	8	8	1	11	2	4	4.7	-2.7	2.0
EMDEs	Successful	8	4	2	2	4	2	2	5.4	-2.9	2.5
	Unsuccessful	14	9	4	1	9	4	1	4.1	-2.8	1.3

Table 9b (median values)

		Successful episodes			Unsuccessful episodes		
		Before	During	After	Before	During	After
All	GDP per capita growth	1.0	2.6	2.3	0.3	1.4	2.4
	Δ Debt to GDP	9.4	0.0	1.6	11.0	4.5	0.2
	Δ Current account balance	1.9	1.8	-0.6	1.1	1.6	0.3
HIC	GDP per capita growth	0.9	2.1	1.5	0.4	1.1	2.1
	Δ Debt to GDP	5.6	0.0	0.6	12.0	6.2	-1.1
	Δ Current account balance	0.9	1.8	-0.6	1.6	1.1	0.1
EMDEs	GDP per capita growth	1.4	2.8	2.8	0.1	2.2	2.6
	Δ Debt to GDP	12.1	-1.4	1.6	10.9	2.8	2.1
	Δ Current account balance	3.6	1.7	-0.6	0.4	2.7	0.6

Before = t - 1 and t - 2; During = years of consolidation; After = last year of consolidation + 1 and last year of consolidation +

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Annex 1. Approaches to decomposing fiscal balance into its cyclical and structural components[46]

Pursuing effective fiscal policy strategies requires precise and informative fiscal indicators. In the context of the fiscal balance (fiscal deficit or surplus), the cyclically adjusted or structural balance aims to provide a measure of the fiscal position that is net of the impact of macroeconomic dynamics on the budget. Note that government revenue comprises taxes and social contributions that are levied on different types of economic activities via statutory tax rate (e.g., expenditure and income). Consequently, government revenue will increase and decrease with economic activity upturns and downturns, respectively. Government spending on the other hand comprises more discretionary components such as wages and salaries as well as capital expenditure, which are typically not automatically adjusted for the business cycle (Burnside and Meshcheryakova, 2004). Hence, except for unemployment benefits, government spending is less affected by the economic cycle, implying that the fiscal balance would tend to improve during economic booms and deteriorate during recessions. This cyclical component of the deficit, when unaccounted for, can (over)understate the size of the actual fiscal deficit. It is therefore critical to correct for the impact of economic cycles on the fiscal balance by appropriately expunging the cyclical component of the fiscal balance to arrive at a more precise and informative measure.

Beyond cyclical adjustments, there is a need to consider structural balance that aims to quantify and remove the impact of: (1) one-off, or temporary, expenditure or revenue items, which do not affect underlying fiscal positions, and (2) factors that are not closely correlated with the business cycle (e.g., changes in asset or commodity prices, or changes in output composition. In this sense, the structural balance component of the fiscal deficit can be thought of as an augmentation of the cyclically adjusted balance. More formally, as defined by the IMF, structural balance refers to the general government cyclically adjusted balance adjusted for non-structural elements beyond the economic cycle (Bornhorst et al., 2011). Consequently, the structural balance captures a more appropriate stance of fiscal policy.

Traditionally, international organizations including the European Commission, IMF, and OECD utilize a standard "two-step approach" in uncovering the cyclical component of the fiscal balance. This involves first computing the cyclical component of the fiscal balance and then subtracting the resulting cyclical component from the actual fiscal balance. Mathematically, the cyclical adjusted balance (CAB) is defined as $(FB/Y)^A - (FB/Y)^C$,

where $(FB/Y)^A$

represents the actual fiscal balance to GDP ratio and

$$(FB/Y)^C$$

is the cyclical component of the fiscal balance. The cyclical component is linked to the output gap, Y^{gap},

via the linear relation $(FB/Y)^C = \alpha Y^{gap}$,

[46] This annex was prepared by John Nana Darko Francois.

α is defined as the cyclical-adjustment parameter, which also measures the *overall budget sensitivity* (Mourre et al., 2013). Given the previous relations, the CAB can be denoted as $(FB/Y)^A - \alpha Y^{gap}$.

Evidently, obtaining the CAB requires two key subcomponents: (1) "good" measure of Y^{gap}

(i.e., the business cycle in output), and (2) a reliable estimate of α that links the output gap and cyclical component of the fiscal balance. The challenge in computing the CAB therefore lies in employing the appropriate methodologies to measure the output gap and accurately estimating the cyclical-adjustment parameter, α.

The output gap is defined as the level of output relative to some benchmark measure. There are several benchmarks including the level of potential output, the trend in output as defined by the Hodrick and Prescott filter, and the trend in output as defined by a peak-to-peak trendline. Despite these options, a commonly used approach by international organizations including the EU, IMF, and OECD is the potential output approach. The level of potential output is defined as the level of output that could be produced if the economy was at full employment or was at the natural rate of employment. The output gap is usually estimated based on a neoclassical production function and the estimates obtained are updated at the time of each macroeconomic forecast. Once the output gap is derived, there are two approaches to estimating the cyclical adjustment parameter - *an aggregate approach or a disaggregated approach* (also termed as the "OECD methodology"). The aggregate approach is based on aggregate revenue and expenditure elasticities while the disaggregate approach is based on the cyclical adjustment of individual revenue and expenditure categories. The parameter is often fixed, and it is only re-estimated periodically (e.g., once every five years). It is derived from estimates or assumptions for: (i) the elasticity of cyclical budget items (taxes, social contributions, and unemployment benefits) in relation to relevant GDP components (wages, profits, and consumption) and unemployment; and (ii) the elasticity of these GDP components and unemployment in relation to overall GDP. These elasticities are usually close to unity on average. This implies that the overall budget sensitivity is usually estimated as being close to the share of cyclical revenue and spending in GDP, which for the euro area is close to 0.5. More intuitively, a 2 percent output gap will be associated with the cyclical component of the budget balance at around 1 percent of GDP.

To obtain the structural component of the fiscal balance, the practitioner needs to identify and remove one-off fiscal operations (i.e., large, non-recurrent fiscal operations) and factors that are not closely correlated with the business such as changes in commodity prices (see, Bornhorst et al., 2011 for detailed discussion).

In 2013, the European Commission released an updated approach that improves the standard approach of deriving the CAB. The proposed improvement involves employing a *semi-elasticity parameter (SEP)* instead of the usual *overall budgetary sensitivity* parameter. The SEP correctly measures the reaction of the balance-to-GDP ratio to cyclical conditions compared to the overall budgetary sensitivity parameter. This is in line with the correct CAB concept, where the budget balance-to-GDP ratio that would prevail if the economy was at potential. This approach differs from the previous concept, based on fiscal sensitivity, which expresses the CAB as a percentage of actual GDP instead of potential GDP. Mourre et al. (2013) document that while the previous method was a satisfactory approximation of the correct CAB concept, the error in the revenue and

expenditure components of the CAB was quite large. The semi-elasticity approach explicitly considers the increasing weight being assigned the composition of fiscal adjustment, besides its size. Since a large part of cyclical revenues move in tandem with the cyclical swings in GDP, the cyclically-adjusted revenue-to-GDP ratio would barely change. On the other hand, most public expenditure does not exhibit a cyclical pattern, resulting in a large impact in terms of the cyclically-adjusted expenditure expressed as a percentage of GDP, mostly driven by the cyclical effect on the denominator (i.e., potential output). The one-to-one cyclical reaction of revenues, with respect to GDP compared to the small cyclical reaction of expenditures, implies that the large "error" made on the revenue side of the budget with the sensitivity method (i.e., not "incorporating" the cyclical effect on GDP) is offset by an "or" of the same magnitude on the expenditure side. Hence, the two are offset in the measurement of the CAB. [47]

It is worth mentioning that the standard approach to computing the CAB is not without conceptual and empirical differences.[48] For example, the potential output, which is used in constructing the cyclical component of the balance for all the approaches described above, requires the definition of the natural or full employment rate. However, there is still debate amongst practitioners and academics on how to define natural or full employment.[49] Additionally, in terms of practical considerations, the question of whether to compute the cyclically adjusted or structural balance remains. Furthermore, there are important choices to be made on whether to fix or estimate the elasticity. Bornhorst et al. (2011) discuss that to address these questions, the practitioner or analyst should consider the following: (i) Purpose of the analysis, (ii) Data availability, (iii) Time horizon, and (iv) Accuracy of elasticity estimates. These considerations can help justify the appropriate methodology to apply in practice.

[47] Mourre et al. (2013) provide a detailed explanation of the new features of the SEP approach.

[48] Recent study such as Carnazza et al. (2020) propose a new approach in uncovering the cyclical-adjusted primary balance. The authors improve the methodology adopted by the European Commission by using quarterly rather than annual frequency data and providing accurate identification of the budgetary items whose response can be considered automatic to the economic cycle.

[49] The OECD computes the natural level of employment using a statistical model to determine the unemployment rate consistent with nonaccelerating inflation, while the IMF method uses unemployment rates defined by the HP trend of observed unemployment to define natural employment (Burnside and Meshcheryakova, 2004).

Annex 2 Lessons from WB Public Expenditure Reviews[50]

The core of fiscal consolidation efforts are discretionary adjustments to revenue and expenditure to reduce the primary fiscal deficit. The need to reduce structural fiscal deficits is an opportunity to enhance the quality of expenditure and revenue. Such structural adjustments need to be grounded in detailed analysis of expenditure and revenue, such as that typically carried out through Public Expenditure Reviews. The Public Expenditure Reviews of the World Bank frequently seek to identify measures to address fiscal imbalances. The stock taking of PERs covering the period 2015-2020 revealed 35 documents with both fiscal consolidation and fiscal adjustment analysis covering 32 countries.[51] The list includes 22 IBRD and only 10 IDA countries, with three of the countries being covered twice (Kenya, Macedonia, and Ukraine). summarizes the findings on fiscal consolidation and fiscal adjustment from the PER stocktaking.

Table 1 Typologies of fiscal adjustment measure

On the **expenditure** side, adjustments would typically include:	On the **revenue** side, adjustments would typically include:
Increasing the efficiency of spending;	*Widening tax bases (including by rationalizing inefficient tax expenditures);*
Reducing government consumption;	*Adjusting tax rates*
Shifting the cost of services from government to households and businesses;	*Introducing new taxes (e.g., carbon taxes and sin taxes);*
Reducing subsidies	*Improving tax compliance (including by strengthening the enforcement capacity of the revenue administration and easing the administrative burden of paying taxes).*

Consolidation measures should be embedded in a medium-term approach. Successful consolidation needs to involve a mix of expenditure and revenue measures. A well-designed consolidation strategy involves an expansion of the tax base and removal of exemptions during the upward cycle, as well as the rationalization of non-discretionary expenditures (pension, wage-bill, debt services). This forward-looking medium-term approach would help create the fiscal space needed to avoid a procyclical adjustment in response to a crisis.

However, many countries have resorted to ad-hoc, short-term fiscal adjustment motivated by a sharp deterioration in fiscal balances. This leads to urgent measures that could be procyclical, especially if the shocks come on top of unresolved structural imbalances. Such fiscal adjustment measures typically involve an increase in existing tax rates and cuts on discretionary

[50] This annex was prepared by Chadi Bou Habib.

[51] In this section we use the term fiscal adjustment for discretionary changes to revenue and expenditure with the goal of generating immediate savings to avoid - or in response to - a fiscal crisis. Fiscal consolidation, on the other hand, is used for medium- to long term efforts to contain deficits and debt.

spending items. The adjustment can be particularly dramatic and procyclical in commodity-exporting countries with few or no fiscal rules and without medium-term fiscal perspective[52] (e.g., Cameroon, Chad, Gabon, Ecuador, Kazakhstan, and Saudi Arabia).

On the expenditure side, consolidation should focus on those categories limiting the fiscal space needed for social and infrastructure spending and setting the stage for structural imbalances. This is typically the case with structural expenditures, non-discretionary by nature, such as wages and pensions of civil servants and military personnel (e.g., Tunisia). Pensions are becoming a major concern for fiscal sustainability in middle-income countries with aging populations (e.g., Armenia, Georgia, Macedonia, Moldova, Montenegro, Romania, Serbia, and Ukraine) and the pension system at large can be a major source of contingent liabilities. In those same countries, SOEs are also often sources of quasi-fiscal imbalances. The medium-term approach to consolidation can lead to a drastic decline in the cyclically adjusted fiscal deficit (e.g., Romania) and substantial improvement in the efficiency of public spending (e.g., Cambodia). Phasing out or reducing subsidies is a hallmark of successful fiscal consolidations, but often faces significant opposition by affected beneficiaries. However, there are examples of successful subsidy reforms as part of fiscal consolidation efforts, especially when they are phased-out over the medium term as part of a gradual and comprehensive package (e.g., Egypt for fuel and Dominican Republic for energy, tentatively).

Table 2. Summary of Findings on Fiscal Consolidation and Adjustment from PERs

Fiscal Adjustment Topic Covered in PERs	Country Examples
Commodity-exporting countries with risk of procyclical adjustment	Cameroon, Chad, Gabon, Ecuador, Kazakhstan, Saudi Arabia
Structural imbalances due to wages and pensions of civil servants and military personnel combined	Tunisia
Contingent and quasi fiscal liabilities from SOEs and pensions, with aging population	Armenia, Georgia, Macedonia, Moldova, Montenegro, Romania, Serbia, Ukraine
Medium-term approach leading to drastic decline in the cyclically adjusted fiscal deficit	Romania
Medium-term approach leading to substantial improvement in the efficiency of public spending	Cambodia
Subsidies phased-out over the medium-term as part of a gradual and comprehensive package	Egypt (fuel), Dominican Republic (energy-tentative), Indonesia (fuel)

[52] For a discussion of the role and design of Sovereign Wealth Funds in commodity exporting countries as a tool to contribute to fiscal stabilization see for example Al-Hassan et al. (2018).

Succession of short-lived and short-term adjustment measures with a worsening fiscal situation and deterioration of public services	Ukraine, Argentina
MTRS aimed at increasing DRM and resources available for public services	Cambodia
Increasing the efficiency of tax systems and reducing leakages	Ghana, Costa Ricca, Myanmar
Expanding the tax base, rationalizing exemptions, and strengthening VAT	Kenya, Lesotho, Sri Lanka
Simulation and minimization of the opportunity cost of consolidation for a country's long term social and economic development	Sri Lanka, Tunisia, Montenegro, Cape Verde
Quantification of shorter-term adjustments aims to estimate savings that would help facing an immediate fiscal crisis	Comoros, Chad, Cameroon, Dominican Republic

Source: World Bank Staff.

A short-term adjustment involving expenditure cuts is necessary to generate immediate savings but can be short-lived if not supplemented by a more medium-term approach to fiscal consolidation. Adjustment may involve a reduction in public services or shifting costs to households and businesses. In the short term, this could be necessary to generate savings under dire fiscal conditions. However, given the welfare implications and the ensuing political-economy pressures, the sustainability of adjustment measures requires a complementing medium-term framework for reforming public finance. Otherwise, the risk is a succession of short-lived and short-term adjustment measures (e.g., Ukraine) with a fiscal situation worsening in parallel to the deterioration of public services and growing disenchantment of the population (e.g., Argentina). Moreover, sharp adjustments may be 'self-defeating' if they result in a permanent reduction in GDP.

Revenue measures would supplement both consolidation and adjustment efforts on spending, especially in situations with narrow fiscal space where the revenue base is small. The impact of spending consolidation and improved efficiency on the supply and quality of services can be boosted by medium term revenue strategies aimed at increasing domestic revenue mobilization (e.g., Cambodia). Revenue measures are also part of countries' fiscal consolidation efforts, with a focus on increasing the efficiency of tax systems and reducing leakages (e.g., Ghana, Costa Ricca, Myanmar). Typically, revenue measures include expanding the tax base, including by rationalizing exemptions (e.g., Kenya, Lesotho, Sri Lanka). Strengthening the efficiency of the value-added-tax is a common tax instrument of focus given its importance to domestic revenue mobilization in EMDEs (Bird and Gendron 2009).

The credibility of consolidation and adjustment measures and the dialogue around them are enhanced when reforms are quantified, and their political-economy dimension discussed. Quantifications of measures of fiscal consolidation and fiscal adjustment are extremely important. Put in a medium-term perspective, quantification of spending reduction, revenue increases, and spending reallocation is key. It allows the simulation and minimization of the opportunity cost of consolidation for a country's long term social and economic development (e.g., Sri Lanka, Tunisia, Montenegro, and Cabo Verde) and, accordingly, allows for the prioritization of programs and spending categories to be consolidated. In the case of shorter-term adjustments, quantification aims at estimating the savings that would help face an immediate fiscal crisis (e.g., Comoros, Chad, Cameroon, and Dominican Republic). Here, particular attention should be given to those categories of spending where immediate cuts may affect the performance of service delivery with long-term scarring effects on development. The IMF strategy on social spending (IMF, 2019) acknowledges its macro-criticality of social spending, and Fund programs increasingly seek to be informed by the Bank's granular knowledge of specific spending categories. An element of importance that is under-reported is the political-economy dimension of immediate adjustments. The harsher the adjustment, the more likely it is to upset specific social groups and to destabilize the political- economy of a country.

Box 1. The experience of Jamaica's comprehensive approach to fiscal consolidation

Following decades of slow growth and weak fiscal management, the stock of public debt in Jamaica peaked at around 147 percent of GDP in 2013, raising concerns about the government's solvency. A high public sector wage bill, weak budget controls leading to chronic deficits, and contingent liabilities arising from many poorly regulated public bodies were all factors in the country's history of high debt. Debt service had grown rapidly since the domestic financial crisis of the mid-1990s, and by 2002 it accounted for 130 percent of total revenues. The high borrowing requirements to finance public debt led to financial repression, which crowded out private sector credit and investment in necessary public goods.

Prompted by difficulties in raising financing to service maturing obligations, Jamaica undertook a restructuring of its debt portfolio in 2010. The JDX successfully consolidated 345 securities into 25 new benchmark bonds with longer maturities and lower coupons. It had a 99 percent participation rate and reduced the net present value of debt by an estimated 20 percent. Multilateral agencies, including the IMF, IADB, CDB, and World Bank, broadly supported the JDX and committed US$2.4 billion to the government's reform program. Support was provided in the context of Jamaica entering a Stand-By Arrangement (SBA) with the IMF. The program was signed in February 2010 but abandoned by 2012, pushing Jamaica toward an economic crisis.

With the international capital market closed to Jamaica, the authorities re-engaged with the IMF, reaching a four-year Extended Financing Facility (EFF) in February 2013. Another debt restructuring was required as a precondition, which further reduced coupons and smoothed and elongated the maturity profile of the debt portfolio. The primary budget surplus target was set at 7.5 percent of GDP over the life of the program, up from an annual average of 3.2 percent of GDP. The target was premised on: (i) strengthening public finances through comprehensive tax reform, expenditure rationalization, and improved management of public

debt and public finances; (ii) enhancing the resilience of the financial sector through strengthened supervisory, regulatory, and crisis management frameworks; (iii) improving growth-generating efficiency through enhancements to the business environment, increased competitiveness, and strengthened institutional capacity and governance; and (iv) protecting the most vulnerable and promoting economic self-reliance through establishment of a social spending floor and expansion of re-certification and the Steps-to-Work program. Several reforms were introduced to ensure fiscal sustainability, including the amendments to the fiscal responsibility law in 2014 to introduce fiscal rules and limits on tax expenditures. Prudent liability management, including the buyback of the PetroCaribe debts to Venezuela at a significant discount, also helped assuage pressures on the budget. This one transaction saved the government close to 10 percent of GDP in debt payments. Following the success of the 2013 EFF, a US$1.64 billion precautionary three-year SBA was signed in November 2016 to allow Jamaica to continue with its economic reform agenda. The successes of the reforms led to drastic changes in the paths of GDP and debt in Jamaica, measured using counterfactuals (Figures 1 and 2).

The government was successful in improving Jamaica's debt dynamics, restoring investor confidence, and laying the groundwork for a gradual recovery of growth. By early 2020, the stock of public debt was down to about 94 percent of GDP, a decline of over 50 percent of GDP. The primary balance accounted for more than 55 percent of the change since 2013. Debt service obligations, although still high relative to many countries, had fallen to 50 percent of total revenues. Credit growth, investment (domestic and foreign), and overall economic activity had begun to accelerate. Fitch raised Jamaica's sovereign credit rating from B to B+, the highest in more than a decade, while sovereign bond spreads in Jamaica were at historic lows, outperforming emerging market averages. Furthermore, capital spending, including infrastructure and social spending, had increased since 2014. Jamaica's external position improved with a current account deficit at 0.3 percent of GDP and international reserves around US$3.9 billion (8 months of total imports). Jamaica's impressive macroeconomic turnaround, achieved through a domestically-owned reform program, has established a solid foundation for further structural transformation, poverty reduction, and economic growth. Jamaica's debt-reduction experience compares favorably with those of Grenada, Iceland, Ireland, and Nauru, all of which successfully reduced their debt stock by an average of 50 percentage points of GDP between 2013 and 2020.

The government's successful effort to consolidate its fiscal balances spanned three political administrations, and it was anchored in a social partnership (Economic Programme Oversight Committee, or EPOC) involving stakeholders from public, private, and civil society. EPOC was established in 2013 to monitor and report to the public on the implementation of economic reform measures under the agreement with the IMF. In February 2021, Jamaica's Senate established the Independent Fiscal Commission (IFC). The decision to create the institution, formerly referred to as the Fiscal Council, was consistent with the government's policy commitments to institutionalize fiscal transparency and strengthen Jamaica's fiscal accountability framework.

Although Jamaica has been successful in reducing debt in recent years, the stock of debt remains high and subject to significant risks. The existing fiscal responsibility law requires that the debt to GDP ratio be 60 percent of GDP or less by 2028. This suggests that fiscal space will be limited for the near future, restricting the government's ability to use fiscal policy to drive its development program. Reforms to improve efficiency in public spending and to broaden the use of public private partnerships will be crucial.

Figure 1. Jamaica: Paths of GDP – actual and counterfactual (sovereign default)

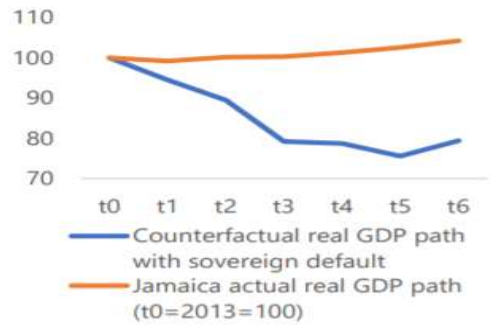
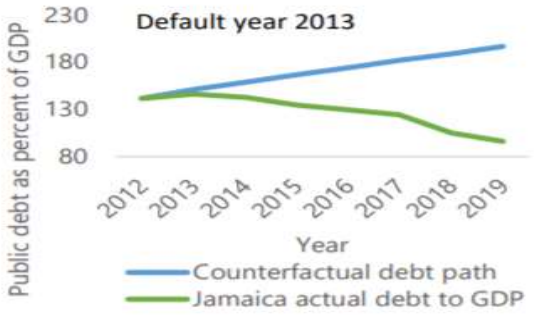


Figure 2. Jamaica: Paths of debt – actual and counterfactual (sovereign default)



Sources: Jamaica Ministry of Finance and the Public Service, IMF, and World Bank Staff. World Bank: IEG (2019).
Note: (2b): This comparison suggests that without the stabilization and reform program, Jamaica would have likely experienced a severe and long recession and a massive build-up of debt with significant social impact.

Source: World Bank Group. 2022. Jamaica – Boosting Recovery and Sustainable Growth. Systematic Country Diagnostic.

Annex 3 Other studies and definitions of fiscal consolidation

This appendix reproduces table A1 from Escolano (2019), which lists studies of fiscal consolidation and the definitions used in those studies, among other details.

Table 3. Reproduction of table A1 from Escolano (2019)

Author(s)	Variable used to Measure Adjustment	Definition of Adjustment Episode	Sample Countries	Sample Years	Number of Episodes	Size of Adjustment (%GDP)
Afonso and Jalles (2011)	Change in CAPB; budget plans	(i) At least 2pp change in the CAPB in one year or at least 1.5 pp change on average over two years; (ii) CAPB change is >1.5 standard deviation in one year; (iii) Fiscal consolidation episodes as defined by Devries and others (2011)	18 countries. ADV/EU	1970-2010	59-79	0.7 to 2.3
Ahrend and others (2006)	Change in CAPB	At least 1pp change in one year; or at least 1pp change in two years with at least 0.5pp in the first year	24 countries OECD	1980-2005	81	> 8
Alesina and Ardagna (1998)	Change in CAPB	At least 2pp change in one year; or at least 1.5pp change in two years	20 countries, OECD	1960-1994	51	NA
Alesina and Ardagna (2009)	Change in CAPB based on Blanchard (1993) methodology	At least 1.5pp change in one year	21 countries, OECD	1970-2007	107	1.85
Alesina and Perotti (1995)	Change in CAPB based on Blanchard (1993) methodology	Blanchard fiscal impulse is less than -1.5 percent of GDP	20 countries, OECD	1960-1992	66	2.6
Alesina and Perotti (1997)	Change in CAPB	At least 1.5pp change in one year; or at least 1.5pp change in two years with each more than 1.25pp	20 countries, OECD	1960-1994	62	2.57
Ardagna (2004)	Change in the CAPB	CAPB improves and, two years after, debt/GDP is at least 3pp lower than in the year of the fiscal tightening	17 countries, OECD	1975-2002		NA
Ardagna (2009)	Change in CAPB	At least 2pp change in one year; or at least 2pp change in two years with each more than 1.5pp	25 countries, OECD	1970-2006	86	2.9
Baldacci and others (2004)	Change in the primary balance	At least 0.5 percent of GDP change per year	25 countries, EME	1980-2001	177	NA
Baldacci and others (2010)	Change in CAPB	Improvement in the CAPB during post-banking crisis years	99 countries, ADV/EME	1980-2008	100	NA
Baldacci and others (2013)	Change in CAPB	At least two consecutive years of reduction in the ratio of public debt to GDP with increases in the CAPB of at least 0.5 percent of GDP per year, sustained for two years or more during the debt reduction episode	107 countries, ADV/EME/LIC	1980-2012	79	3.9
Barrios and others (2010)	Change in CAPB	At least 1.5pp change in one year; or at least a 1.5pp change in three years, with no annual deterioration larger than 0.5pp	23 countries, EU/OECD	1978-2008	235	NA
Devries and others (2011)	"Policy-action" approach	As identified by contemporaneous policy documents	17 countries, OECD	1978-2009	173	Annual of 0.74
Eichengreen and Panizza (2014)	Level of primary balance	Primary surplus episode is large when the average value of the primary surplus during the episode is, alternatively, greater than 3, 4, or 5 percent of GDP. Primary surplus is persistent when the episode lasts at least 5, 8, or 10 years.	54 countries, ADV/EME	1974-2013	36	NA
Giavazzi and Pagano (1990)	Changes in taxes net of transfers and government consumption	All country/years in sample	10 countries, EU; focus on Denmark and Ireland	1973-1989		NA
Guichard and others (2007)	Change in CAPB	At least 1pp change in one year; or at least 1pp change in two years with each more than 0.5pp	24 countries, OECD	1978-2006	85	2.8

Author(s)	Variable used to Measure Adjustment	Definition of Adjustment Episode	Sample Countries	Sample Years	Number of Episodes	Size of Adjustment (%GDP)
Guajardo and others (2011)	"Policy-action" approach	As identified by contemporaneous policy documents	17 countries, OECD	1978-2009	173	0.99
Gupta and others (2005)	Change in the overall deficit	At least 1 percent of GDP improvement in one year	25 countries, EME	1980-2001		NA
Heylen and Everaert (2000)	Change in CAPB	At least two consecutive years when the CAPB improved by at least 2pp (at least 0.25pp in the first year)	18 countries, OECD	1975-1995	39	3.2
Hjelm (2002)	Change in CAPB	At least 3 pp in one year; or at least 3 pp over 2 years; or at least 4 pp over 3 years; or at least 5 pp over 4 years	19 countries, OECD	1970-1997	19	NA
IMF (2013a)	Level of primary balance	Maximum five-year moving-average primary balance	43 countries, ADV/EME	1950-2012		3½-4
IMF (2013b)	Level of CAPB, change in CAPB	Average CAPB for any consecutive 3-year period; change in the CAPB over 3 years	54 countries, ADV/EME	1990-2011		CAPB level of 3.5; CAPB change of 3
Kumar and others (2007)	Change in CAPB	At least 1pp improvement in one year	24 countries, OECD	1972-2006	81	1.7
Lambertini and Tavares (2007)	Change in the primary balance	At least 1.5pp improvement in one year	20 countries, OECD	1970-1999	99	NA
Mati and Thorton (2008)	Change in the primary balance	At least 0.75pp improvement in one year; at least 1.5pp improvement in one year and no deterioration in the following two years	23 countries, EME	1970-2004	198; 132	NA
McDermott and Wescott (1996)	Change in CAPB	At least 1.5pp improvement over 2 years and does not decrease in either of the two years	20 countries, OECD	1970-1995	74	NA
Molnar (2012)	Change in CAPB	At least 1.5pp improvement per year; gradual but continual tightening over several years		1960-2009		3
Perotti (2012)	"Policy-action" approach	As identified by contemporaneous policy documents	Denmark, Finland, Ireland, Sweden	1982-1998	4	6.2
Tsibouris and others (2006)	Change in primary Balance	Uninterrupted improvement in the primary budget balance	165 countries, ADV/EME/LIC	1971-2001	366	>5
Von Hagen and others (2002)	Change in CAB	At least 1.25pp improvement for two years; or at least 1.5pp improvement in one year and positive in the preceding and following year	20 countries, OECD	1960-1998	65	2.29
Von Hagen and Strauch (2001)	Change in CAB	At least 1.25pp improvement for two years; or at least 1.5pp improvement in one year and positive in the preceding and following year	20 countries, OECD	1960-1998	65	2.29
Zheng (2014)	Level of primary balance	Average primary fiscal surplus over a five-year period	87 countries, ADV/EME	1956-2009		NA

Note: CAPB: cyclically adjusted primary balance as a percent of potential GDP; CAB: cyclically adjusted balance as a percent of potential GDP; pp: percentage point of potential GDP; ADV: advanced countries; EME: emerging market economies' LICs: low income countries; EU: European Union

Annex 4 Data and sources

Table 4. List of sources and indicators

Source	**Indicator**
World Economic Outlook (WEO)	General government primary net lending/borrowing (% GDP)
	General government net lending/borrowing (% GDP)
	General government revenue (% GDP)
	General government total expenditure (% GDP)
	General government gross debt (% GDP)
	Current account balance (% GDP)
	Gross domestic product per capita, constant prices (national currency)
	Gross domestic product, current prices (U.S. dollars)
Government Finance Statistics (GFS)	Total expenditure (% GDP)
	Expenses (% GDP)
	Compensation of employees (% GDP)
	Use of goods and services (% GDP)
	Social benefits expense (% GDP)
	Subsidies expense (% GDP)
	Interest expense (% GDP)
	Grants expense (% GDP)
	Consumption of fixed capital (% GDP)
	Gross/net investment in nonfinancial assets (% GDP)
	Revenue (% GDP)
	Taxes on income, profits, and capital gains: payable by individuals (% GDP)
	Taxes on income, profits, and capital gains: payable by corporations and other enterprises (% GDP)
	Taxes on property (% GDP)
	Value-added taxes (% GDP)
	Excises (% GDP)
	Taxes on international trade and transactions (% GDP)
	Grants (% GDP)

	Social contributions (% GDP)
World Development Indicators	Poverty headcount ratio at $2.15 a day (2017 PPP) (% of population) [SI.POV.DDAY]
WDI	Gini index [SI.POV.GINI]
MFMod Overall balance and debt are replicated from WEO for this analysis (debt-creating flows) to use one source for all indicators	Exchange rate (LCU / USD Value LCU)
	Primary Fiscal Balance (LCU % of GDP)
	Overall Fiscal Balance (LCU % of GDP)
	Gross Domestic Product at Market Price Value (Millions LCU % change)
	General Government Debt Stock (Millions of Local Currency % of GDP)
	General Government External Debt Stock (USD % of GDP)
	Gross Domestic Product at Market Price Volume (Millions LCU % change)
EM-DAT	Data on disaster damages (current USD)
IMF	Commodity terms of trade index (weighted by ratio of exports to total commodity exports with time varying, rolling weights)

Table 5. List of derived indicators

Indicator	**Notes**
Primary expenditure (% GDP)	Calculates net interest expense by taking the difference between the primary balance and the overall balance (WEO data). Assumes interest revenue is zero, which treats net interest expense as interest expense. Subtracts interest expense from total expenditure to estimate primary expenditure.
Real GDP per capita growth	Calculates a year-on-year growth rate for each year using WEO data on real GDP per capita.
EM-DAT disaster damage figures (% GDP)	Divides estimates of total disaster damages (including natural and technological disasters) in each year by the WEO's estimate of GDP in current USD.
Other expenses (% GDP)	A residual. Subtracts known components of expense from total expense. Required in cases of missing granular indicators.

Other taxes (% GDP)	A residual. Subtracts known components of total taxes from total taxes. Required in cases of missing granular indicators.
Debt-creating flows	See LIC Debt Sustainability Framework guidance note for more information
Cyclically adjusted primary balances (% GDP)	See forthcoming note on cyclicality by EMFTX for more information
Debt-stabilizing primary balances	See Escolano (2010)