



Independent Evaluation Office
of the International Monetary Fund

BACKGROUND PAPER



BP/21-01/03

Fiscal Adjustment and Growth in IMF-Supported Programs

Sanjeev Gupta

IEO Background Paper
Independent Evaluation Office
of the International Monetary Fund

Fiscal Adjustment and Growth in IMF-Supported Programs

Prepared by Sanjeev Gupta*

June 30, 2021

The views expressed in this Background Paper are those of the author and do not necessarily represent those of the IEO, the IMF or IMF policy. Background Papers report analyses related to the work of the IEO and are published to elicit comments and to further debate.

* Senior Policy Fellow, Center for Global Development, Washington, D.C. I wish to thank Charles Collins and Jun Kim for insightful comments on earlier versions of the paper, Jung Yeon Kim for her help and guidance on IMF conditionality, and Hasan Toprak and Joshua Wojnilower for research assistance.

Contents	Page
Abbreviations _____	v
Executive Summary _____	vi
I. Introduction _____	1
II. Literature Review _____	2
III. Calibrating the Short-Term Impact of Fiscal Adjustment on Growth _____	9
IV. Attention to Growth in Fiscal Policy Conditionality _____	11
V. Program-Related Outcomes in Tax Mobilization and Expenditure Composition _____	20
VI. Growth Impact of Fiscal Adjustment and Reforms _____	29
VII. Assessment and Lessons _____	30
 Figures	
1. Share of Fiscal SC in Total SC _____	12
2. Share of Expenditure SCs in Total Fiscal SCs _____	12
3. Distribution of Tax-Related SCs in IMF-Supported Programs _____	14
4. Share of Fiscal SCs Met _____	15
5. Fiscal SC by Depth _____	15
6. Fiscal SC Implementation by Depth _____	15
7. Fiscal SC by Growth Orientation _____	16
8. Implementation of Fiscal SC on Transparency _____	16
9. IMF TA in the Revenue Area _____	17
10. Share of SCs and TAs by Sector _____	18
11. IMF TA and SC Implementation in Fiscal Area _____	19
12. Interquartile Range for Tax-to-GDP Ratio in GRA and PRGT Programs _____	22
13. Interquartile Range for Education Spending in GRA and PRGT Programs _____	24
14. Interquartile Range for Health Spending in GRA and PRGT Programs _____	25
15. Social Spending: Normal Completion vs. Off-Track Programs _____	25
16. Share of Programs with Growth-Friendly Fiscal Outcomes _____	27
17. Fiscal SCs, Public Investment, and Social Spending _____	28
18. Public Financial Management Conditionality in IMF-Supported Programs, 1992–2016 _____	29
 Tables	
1. Fiscal TA and SC Implementation: Fractional Logit Regressions _____	19
2. Tax and Expenditure Trends Associated with IMF-Supported Programs _____	21
3. Trends in Government Expenditure by Function Associated with IMF-Supported Programs _____	24

Appendix Tables

A1. Tax and Expenditure Trends Associated with IMF-Supported Programs— Normal Completion	34
A2. Tax and Expenditure Trends Associated with IMF-Supported Programs— Off-Track Programs	34
A3. Tax and Expenditure Trends Associated with IMF-Supported Programs— Fragile States	35
A4. Tax and Expenditure Trends Associated with IMF-Supported Programs— Crisis Programs	35
A5. Trends in Government Expenditure by Function—Normal Completion	36
A6. Trends in Government Expenditure by Function—Off-Track Programs	36
References	37

ABBREVIATIONS

CD	Capacity Development
FSCI	Fiscal SCs Implementation Score
FSCID	Fiscal SC Implementation and Depth Composite Score
FSCIDG	Fiscal SC Implementation, Depth and Growth Orientation Composite Score
GDP	Gross domestic product
GFC	Global Financial Crisis
GRA	General Resources Account
OECD	Organisation for Economic Co-operation and Development
PIM	Public Investment Management
PRGT	Poverty Reduction and Growth Trust
LIC	Low-Income country
QPC	Quantitative Performance Criteria
SC	Structural Conditions
TA	Technical Assistance

EXECUTIVE SUMMARY

This paper focuses on growth implications of fiscal adjustment undertaken in IMF-supported programs. It reviews the extensive literature on fiscal policies and growth in the short and medium/long term—in both advanced and developing countries, including consequences for distribution of income. It then draws on the experience of fiscal programs in selected countries, as well as tax and expenditure-related structural conditionality across 131 programs implemented during 2008 and 2019, and presents a tentative analysis of the growth effect of fiscal policies in the short and medium term. The paper pays particular attention to the subject of short-term fiscal multipliers, examines the design and implementation of fiscal structural conditionality, and discusses the role of IMF capacity development (CD). Finally, it assesses program impact on tax mobilization and the structure of expenditures.

Regarding fiscal multipliers, the paper finds general consistency between multiplier assumptions and the empirical literature, increased awareness among staff of the relevance of fiscal multipliers in program design, and some specific work by country teams to analyze the magnitude of multipliers in specific contexts. Nonetheless, fiscal multipliers are rarely reported or discussed in IMF program documents, and more could be done to fine-tune multiplier assumptions for particular country circumstances.

While fiscal conditionality plays a major role in IMF-supported programs, with two-thirds of all conditions classified as fiscal, only a small fraction of conditions require permanent institutional change. Nearly four-fifths of fiscal structural conditions (SCs) are intended to support fiscal adjustment. Fiscal SCs with high-depth and higher growth orientation are positively associated with more growth-friendly fiscal outcomes during programs and have a positive impact on medium-term growth. The implementation of conditionality on fiscal transparency has been particularly problematic in Poverty Reduction and Growth Trust (PRGT)-supported programs.

The heavy use of fiscal SCs is matched by the growing CD activities of the IMF in the fiscal area. Much of this work is appreciated in the country context, but overall the data do not show much relationship between CD and implementation. This may be related to the fact that the department responsible for fiscal capacity building does not take part in the assessment of the implementation of SCs in revenue mobilization and public financial management as part of its country work.

The paper identifies improvements in tax mobilization in PRGT countries after programs end, providing space for higher government spending, particularly on capital projects. The increase in tax collection is larger in countries that stay on course and complete the program. Countries with General Resources Account (GRA)-supported programs are able to contain the size of government and create room for the private sector to grow by maintaining tax-to-GDP ratio and making the tax structure more growth promoting in the post-program period. However, we do not find significant increases in education and health spending in either PRGT- or GRA-supported programs in the post-program period.

The paper recommends that (i) IMF staff explicitly discuss its analysis of short-term fiscal multipliers in staff reports to enable a better understanding of staff's underlying assumptions and assessment regarding the short-term growth and equity consequences of fiscal adjustment; (ii) depending on implementation capacity, IMF-supported programs aim at raising the proportion of high-depth fiscal SCs from their current low share, particularly in GRA countries; (iii) PRGT-supported programs focus more on strengthening public financial management practices to raise public spending on education and health rather than seeking merely to protect or boost such spending in the short term; (iv) a greater proportion of public financial management and revenue administration conditionality be drawn from the outcomes of governance missions initiated under the new governance policy; and (v) CD missions on revenue mobilization and public financial management contribute to the assessment of whether program conditionality in these areas is fulfilling program goals.

I. INTRODUCTION

1. The stated objective of fiscal adjustment under IMF-supported programs is to contribute to restoring macroeconomic stability and improving balance of payments viability while creating conditions for sustainable growth. In low-income countries (LICs), programs have sought to reduce poverty as well. Increasingly, IMF-supported programs are paying attention to inclusive growth—where benefits are shared widely across the population—requiring increased focus on the distributional impact of fiscal policy.

2. Fiscal adjustment typically has a short-run negative impact on aggregate demand, but the scale and time frame of its effects depend on the composition of measures and the circumstances. Fiscal adjustment implies a lowering of the overall budget deficit through a mix of tax and expenditure policies. Reduced spending and higher taxes cut into household incomes in the short term. The extent to which growth is negatively affected as a result depends in part on the credibility of fiscal measures in the eyes of private actors. In countries with relatively high public debt and borrowing costs, fiscal consolidation may actually boost growth by elevating market confidence, lowering the cost of financing for private as well as public borrowers. In addition, since tax and expenditure policies alter the incentive structure facing savers and investors and those who participate in the labor market and affect economy-wide productivity, fiscal adjustment holds significance for medium- to long-term growth as well. Typically, IMF-supported programs contain multiple fiscal measures not only to restrain government demand and raise taxes but also to influence the structure of revenues and expenditures over time.

3. This paper focuses on growth implications of fiscal adjustment undertaken in IMF-supported programs. The literature on the effects of IMF programs on growth abounds,¹ as does the literature on whether social spending has been protected in these programs.² The paper reviews this extensive literature on fiscal adjustment and growth, and then presents new evidence based on the experience of selected countries with fiscal programs as well as analysis of fiscal conditionality across 131 Fund-supported programs (including arrangements treated as precautionary) approved and completed between September 2008 and March 2020.

4. The paper is organized as follows. The next section (II) presents a brief review of the literature on growth and fiscal adjustment, highlighting differences between advanced and developing countries. It discusses evidence of how tax and expenditure reforms affect economic growth. Section III looks at how IMF staff calibrated the short-term growth impact of fiscal policy design in IMF-supported programs, paying particular attention to the subject of short-term fiscal multipliers. The following section (IV) focuses on the use and performance of tax and expenditure conditionality in IMF-supported programs and the support from IMF capacity development (CD).

¹ For example, see Przeworski and Vreeland (2000), Atoyán and Conway (2006), Dreher (2006), and Newiak and Willems (2017).

² For example, see Clements and others (2013) and Kentikelenis and others (2016).

Section V provides evidence on trends in tax mobilization and structure of expenditures in the program context. Section VI summarizes results from a model-based analysis of growth impact of fiscal adjustment. Section VII suggests some key lessons.

II. LITERATURE REVIEW

5. This section briefly reviews the extensive literature on the impact of fiscal adjustment on growth—in the short and medium/long term—in both advanced and developing countries, drawing on research inside and outside the IMF. Besides looking at the macro impact of overall fiscal policy, it discusses the possible impact of various revenue and spending policies on resource allocation.

6. The relationship between fiscal policies and growth outturns (including distributional outturns) is highly complex since it operates through numerous channels. In the short term, the main effect is through the impact on aggregate demand including through confidence effects as well as direct income and spending effects. In the longer term, it also operates through changed incentives to save and invest in both physical and human capital, incentives to participate in the labor market, and productivity effects, responding to changes in tax structure and the composition of expenditures. The section concludes with a brief discussion about fiscal governance issues, highlighting how corruption undermines the effectiveness of revenue and expenditure policies in promoting growth.

Short-Term Output Effects of Fiscal Adjustment

7. The short-term impact of lowering fiscal deficits on output depends on the cyclical position of the economy, the scope for offsetting monetary policy, and the economy's structural characteristics (e.g., whether an economy is closed or open, whether it has flexible or fixed exchange rates) (Ilzetzki, Mendoza, and Vegh, 2013; Batini and others, 2014). Under standard Keynesian approaches, the fiscal multipliers in advanced economies—the short-term impact of discretionary changes in spending and/or taxes on output—have been estimated to average 0.75 for government spending and 0.25 for government revenues.³ More recent studies show that fiscal multipliers in these countries can exceed 1.0 if there is a high degree of economic slack and/or when the transmission of monetary policy is impaired (Blanchard and Leigh, 2013; Kataryniuk and Valles, 2017). The size of multipliers is smaller in emerging-market and low-income economies (Batini and others, 2014; IMF, 2017) in part because these economies are more open and in part because weaknesses in their public expenditure management and revenue

³ It has been argued that under full Ricardian equivalence (Barro, 1974; Campbell and Mankiw, 1990), changes in current taxes and transfers would have no impact on output. This is because rational consumers would take account of expected future changes in taxes and transfers, discounting the future by using interest rates on government paper, implying that the value of today's tax cuts and of future tax increases would offset each other. In reality, credit-constrained consumers value tax cuts today more highly than implied future tax increases, allowing expansionary tax and transfer policies to have an impact on output. Under these assumptions, the tax multiplier has been estimated to range between 0.12 and 0.40 for the United States (Bayoumi and Sgherri, 2006).

administration systems constrain the full impact of fiscal policy on output. These weaknesses reflect poor governance of spending programs, including wasteful public investment and leakages arising from corruption as well as the inability of governments to properly administer taxes, which limits the impact of tax policy and administrative changes on the economy.

8. When an economy is in a deep downturn, a large upfront fiscal consolidation can be particularly damaging for growth. This is because there is limited scope for monetary or other policies to provide a countercyclical cushion and because of possible scarring effects, with temporary worker layoffs becoming permanent as workers' skills and labor force attachment deteriorate (DeLong and Summers, 2012). In these circumstances, private investment is likely to remain low, further accentuating the negative effects on output. A more gradual fiscal adjustment phased over the medium term could then be associated with relatively smaller output losses provided countries can access sufficient deficit financing to resist pressure to adjust from the markets (Blanchard and Cottarelli, 2010; Chari and Henry, 2015).

9. That said, the relationship between fiscal adjustment and growth is strongly affected by fiscal sustainability and debt stock concerns. Not only do high fiscal deficits lead to macroeconomic instability, especially if associated with monetary financing that undercuts central bank credibility (as reflected in high inflation rates) with consequences for growth, but the resulting rising public debt can lower private-sector spending because of falling confidence in the ability of the government to maintain a sustainable fiscal position (Fischer, 1993; Fatas and Mihov, 2013; Pescatori, Sandri, and Simon 2014; Woo and Kumar, 2015).⁴ More recent evidence suggests that a *rising* debt-to-GDP ratio hurts economic growth (Chudik and others, 2017). A high debt level also limits room for countries to respond to shocks with countercyclical fiscal measures with an adverse impact on confidence and financing costs.

10. The composition of fiscal adjustment matters for growth in part because it can affect expectations about the durability of the fiscal correction. In advanced economies, fiscal adjustments centered on spending cuts have been found to be less harmful to growth than those centered on tax increases, particularly when they are supported by permanent cuts rather than one-off spending reductions (Alesina, Favero, and Giavazzi, 2015; Yang, Fidrmuc, and Ghosh, 2015). Such consolidations are also more durable (Alesina and Ardagna, 2013). The differential effect of spending cuts vis-à-vis tax increases is attributable to the positive reaction of investors who have more confidence in sustained improvements in fiscal accounts when expenditure-based adjustments are implemented. Giavazzi and Pagano (1990) have argued that expectations about lower future taxes and spending can raise current private consumption, more than offsetting the negative impact of fiscal contraction—a phenomenon that has been labeled “expansionary fiscal contraction.” The literature has found that such effects are different in

⁴ In LICs, the relationship between fiscal deficits and growth is not linear, as the growth-enhancing effects of lower deficits disappear once fiscal deficit reaches 1½ percent of GDP (Adam and Bevan, 2013). Countries that have achieved macroeconomic stability can afford to have higher deficits without adverse implications for growth (Gupta and others, 2005a).

emerging market economies and LICs where revenue-based adjustments have in practice proven to be not only durable but also more supportive of growth (Baldacci and others, 2004; Gupta and others, 2005b). The implication is that revenue-based fiscal consolidation has a lower cost in terms of foregone output (IMF, 2017).⁵ The presence of credit supply constraints may require a fine-tuning of the policy mix. In these circumstances, an exclusive reliance on expenditure-based adjustments can be more damaging to growth than a mix of revenue and expenditure measures (Baldacci and others, 2006; Baldacci, Gupta, and Mulas-Granados, 2015).

11. Political economy considerations matter as well. Fiscal consolidations are likely to be more enduring when governments have a strong capacity to sustain their policy framework, for example, because they enjoy a sizeable parliamentary majority and elections are not imminent (Baldacci and others, 2006). In some instances, back-loading of fiscal adjustment has a greater probability of success if it allows for a more drawn-out impact on demand conducive to sustaining political support for the austerity program. However, in other circumstances, the vulnerability of the current situation may not provide the luxury of a gradual adjustment, and a large upfront adjustment can help to raise confidence.⁶ The literature thus suggests that fiscal adjustment should be tailored to country circumstances, and there is no unique fiscal package to limit adverse growth consequences that works in all circumstances.⁷

12. Political ideology influences the composition of fiscal adjustment (Herwartz and Theilen, 2020). Right-wing governments tend to reduce spending more on categories containing a large share of public employee compensation (i.e., public consumption spending). In a similar vein, a right-wing government is more likely to increase the value-added tax (VAT) than is a left-wing government at the time of a banking crisis, while a left-wing government is more likely to increase the top personal income tax rate. Left-wing cabinets are positively and strongly associated with larger public investment booms (Gaspar, Gupta, and Mulas-Granados, 2017). Political ideology also plays a role in the implementation of tax reforms in emerging and LICs (Gupta and Jalles, 2020).

⁵ However, programs in Ghana and Mongolia were premised heavily on expenditure cuts. In Mongolia, the emphasis was on cutting capital outlays.

⁶ The case studies discuss several instances wherein programs were front-loaded (Egypt, Ghana, Grenada, Jamaica, Latvia, and Malawi). Whether front- or back-loading measures improves outcomes depends on program's ability to restore credibility of policies and enhance confidence in the economy. In Egypt, front-loading was successful in achieving these objectives. By contrast, the 2010 Jamaica program collapsed because of adverse security developments and the damage caused by a tropical storm.

⁷ This is illustrated by experiences reported in the case studies. For example, the reform of fuel subsidies in Tunisia was opposed by politically influential urban middle classes. On the other hand, certain revenue measures were resisted by certain population groups in Honduras and Jordan. In the former, vested interests opposed reform of the large taxpayers' office, and in the latter, there was strong political resistance to broadening of the income tax base, which involved curtailing tax exemptions for more than 95 percent of the population. In Pakistan, the value-added tax (VAT) legislation was withdrawn because of strong antagonism from provincial governments, the agricultural sector, and civil society.

13. The political economy of fiscal adjustment is further complicated because even while improving fiscal sustainability, fiscal adjustment has often worsened income inequality, mainly because of falling employment opportunities and reliance on less progressive expenditures and taxation (Furceri, Jalles, and Loungani, 2015; Woo and others, 2017). Expenditure-based adjustments tend to worsen inequality more than do tax increases. On average, a consolidation of 1 percentage point of GDP has been associated with an increase in the disposable income Gini coefficient of about 0.5 percent over the first two years. The inclusion of certain fiscal measures (such as increased spending on social benefits and more progressive taxation) in the consolidation package can mitigate the impact of fiscal adjustment on income distribution—a result that has important implications for the design of inclusive growth strategies. Indeed, this was the approach followed by European adjustments in the aftermath of the global financial crisis (Fabrizio and Flamini, 2015).

Tax Structure and Long-Term Growth

14. Tax structures matter for long-term economic growth (Kneller, Bleaney, and Gemmell, 1999; Lee and Gordon, 2005; Arnold and others, 2011; Acosta-Ormaechea, Sola, and Yoo, 2018). The underlying hypothesis is that reduced reliance on distortionary taxes (which have disincentive effects) is beneficial to growth. Distortionary taxes blunt the incentive to invest in human and physical capital, thereby undermining the economy's long-run productivity growth, and to participate in the labor force.

15. Studies have ranked the taxes most harmful to growth (Arnold and others, 2011). Both corporate and personal income taxes are considered more distortionary than consumption taxes. In general, tax distortions influencing incentives to invest have a greater negative impact on growth than those affecting labor-leisure choice because elasticities of response are larger. Empirical studies for both advanced and developing countries have found that increases in the share of income taxes in the total tax take lower economic growth, with the impact being larger in the former than the latter group of countries. A shift in favor of consumption and property taxes is less detrimental to aggregate growth, while a move away from trade taxes in favor of consumption taxes is growth friendly in lower-middle-income countries (McNabb, 2018). However, as discussed below, there are also distributional issues to consider.

16. There are two channels through which corporate income taxes influence the incentive to invest and an economy's productivity. First, these taxes lower after-tax returns on investment, thereby discouraging new investment, including foreign direct investment (Abbas and Klemm, 2012). However, this impact is mitigated to the extent that firms engage in tax planning. And taxes are one of the many considerations that enter a firm's location decision. Second, corporate taxes affect productivity by reducing the incentive to invest in innovative activities.

17. Taxes on labor income can affect the decision to participate in the labor market and average hours worked. High tax wedges increase labor costs and reduce overall employment, at least in the formal sector (Bassanini and Duval, 2006; IMF, 2014). Taxes affect the average hours

worked by women more than men, particularly when a higher tax rate is effectively applied to the second earner in a household (Saez, Slemrod, and Giertz, 2012). Reducing the tax wedge can help address the problem with youth unemployment.

18. While consumption taxes do not discourage savings and investment, their impact can be regressive. This is because low-income households spend a larger share of their income on consumption compared to high-income households. The progressivity of the tax system is influenced by how different tax instruments are combined, with consequences for post-tax income distribution. That said, the overall progressivity of the fiscal system can be improved if revenues from consumption taxes are used to finance pro-poor spending. This suggests that analysis of the incidence of consumption taxes should be combined with incidence of the spending that taxes finance.

Expenditure Composition and Long-Term Growth

19. As with shifts in tax structure, reallocation of public spending toward infrastructure and education is generally beneficial to growth in the long run (Gemmell, Kneller, and Sanz, 2016). In contrast, a shift in favor of social welfare spending could modestly lower long-run growth, depending on how it is structured, although such a strategy would have important income distribution consequences.

20. Public investment in infrastructure, in principle, enhances a country's capital stock and raises its long-run productivity as well as boosting aggregate demand in the short run (Romp and De Hann, 2007; Bom and Ligthart, 2009). Moreover, public investment has positive spillovers on private investment. The impact is likely to be larger in developing countries facing enormous infrastructure gaps. But weak public investment management (PIM) processes can seriously undermine the growth benefits of public capital, with IMF estimates suggesting that productivity of public capital is lowered by 27 percent on average in both advanced and developing countries, with productivity losses amounting to 40 percent in LICs (IMF, 2015b). Drawbacks in PIM processes as gauged by IMF's Public Investment Management Assessment (PIMA) tool suggest weaknesses in project appraisal, selection and management, asset monitoring, and the management of public-private partnerships (IMF, 2018a).⁸ Even countries that have well-designed PIM processes on paper may not implement them in practice. For example, the government may not adhere to laws to ensure transparency of procurement. This means that the full benefits of the public investment program may not be realized either because PIM processes have limitations or because they are not applied. Such weaknesses are more pervasive in LICs.

21. Public spending on education can help raise the stock of human capital, thereby increasing labor productivity and growth, and bringing distributional benefits (Baldacci and others, 2008). From an efficiency perspective, public spending on education is justified on the

⁸ Since its introduction in 2015, PIMA has sought to help countries strengthen their public investment processes, with over 50 assessments conducted by mid-2019 covering both advanced and developing countries.

grounds that its public benefits exceed those captured by private individuals. Higher long-term growth is associated with both the level and the number of school years completed by the population—although the lags may vary across countries and can be as long as three decades (Hanushek and Woessmann, 2012). In this context, improving access of disadvantaged population groups and girls to education facilities has a significant impact on growth and on reducing income inequality. Education spending is crucial for influencing pretax income distribution and is an important way to promote intergenerational mobility in a society.

22. There are multiple channels through which public health spending affects growth. First, healthier workers are more productive and less likely to be absent from work. Second, these workers are more likely to acquire additional skills, since cost of higher education can be amortized over a longer time period (Aghion, Howitt, and Murin, 2010). According to Jamison and others (2013), rising life expectancy made possible by investing in health can add to long-term growth by lengthening productive working lifetimes and thus increasing growth of the labor force; between 2000 and 2011, this was equivalent to a 1.8 percent annual increase in GDP in low-income and middle-income countries. The increase was larger, at 2.9 percent annually, for South Asia during the same period. A provision of universal access to a basic package of health services in countries that do not have one would boost long-term growth, provided it is fiscally sustainable.

23. Empirical evidence confirms that the quality of education and health spending has a significant impact on the economy's supply side. The scope for enhancing the efficiency of public spending on education and health is immense in both advanced and developing countries (Herrera and Pang, 2005; Grigoli and Kaspoli, 2018; Dutu and Sicari, 2016). Following the 2017 IEO evaluation of the IMF and social protection, the Fund has placed increased emphasis on sustainability and quality of social spending and called for strengthening relevant conditionality in Fund-supported programs (IMF, 2019e). A recent technical note prepared by FAD highlights IMF's engagement with countries on social spending during the COVID-19 pandemic to minimize potential scarring from the crisis (IMF, 2020).

24. Social welfare spending influences incentives to participate in the labor market and also has important distributional consequences. A generous unemployment benefits scheme would tend to increase aggregate unemployment by discouraging labor market participation (Johansson, 2016). In contrast, ensuring continued incentives and capacity to return to employment with active labor market programs (such as well-designed labor market training and private-sector incentive programs) and in-work benefits (comprising direct earnings subsidies and tax credits) can help reduce unemployment. While recognizing potentially adverse incentive effects, policymakers cannot overlook the positive benefits for income distribution of social welfare spending and protection of vulnerable groups. In OECD countries, the bulk of redistribution occurs through social transfers. On average, about three-quarters of the reduction in inequality between the market and the disposable income Gini coefficient in these countries is attributable to such transfers. However, in developing countries, the impact of transfer programs

on the disposable income Gini is more limited mainly because of insufficient revenues to support transfer programs and because of poor targeting of those programs (Clements and others, 2015).⁹

25. In practice, it is challenging to distinguish between short- and long-term output effects of fiscal policy since a policy change (e.g., corporate tax rate) can have a short-term effect that can persist as the policy becomes permanent (Coenen and others, 2012). Furthermore, it is tricky to unravel the impact of fiscal measures on growth from other reforms implemented at the same time as fiscal measures. The long-term impact of fiscal structural reforms on per capita GDP has been estimated to range between $\frac{3}{4}$ percentage points in advanced economies and $2\frac{1}{2}$ percentage points in emerging and low-income economies (IMF, 2015a). This result has been derived by using the synthetic control method; country studies show a significant increase in average growth during the 10 years following fiscal reform episodes, compared with the counterfactual.

Implications of Corruption for Fiscal Policies and Growth

26. The above analysis suggests that well-designed tax and spending policies should contribute to growth and income equality in the short and long terms in countries with IMF-supported programs. However, there is evidence to suggest that the prevalence of corruption—defined as the abuse of public office for private gain—weakens the capacity of the government to perform its core functions, including collecting taxes and supplying public goods and services in a fair and efficient manner. Thus, corruption weakens key drivers of inclusive growth, such as public investment and human capital accumulation (IMF, 2016; 2019a).

27. Widespread corruption impairs the culture of compliance with tax laws and diminishes the state's capacity to provide public goods and services. This can happen when officials enjoy widespread discretion in conferring tax exemptions, in granting custom clearances, or in the application of tax laws. Tax expenditures can be significant as a share of both GDP and total tax collections and a major source of revenue leakage with implications for income distribution (Gupta, 2018). Countries that are less corrupt collect between $2\frac{3}{4}$ percent of GDP and $4\frac{1}{2}$ percent of GDP more revenue than those perceived to be more corrupt (IMF, 2019a). A reduction in corruption by one-third is associated with higher government revenues to the tune of 1.2 percent of GDP.

28. Corruption distorts the composition of spending in favor of programs susceptible to rent seeking. In this context, spending on large-scale public investment projects and/or acquiring expensive defense equipment is prone to kickbacks (Tanzi and Davoodi, 2002; Gupta, de Mello, and Sharan, 2001; Ali and Solarin, 2019). This implies that public investment projects would generate lower rates of return in an environment of corruption. In fact, public investment efficiency improves when corruption falls (IMF, 2019a). In addition, social outcomes such as child

⁹ The widespread use of conditional cash transfers in Latin America has improved targeting of social transfers to the poor. However, these transfers do not have the same impact on the disposable income Gini as found in OECD countries, in part because budgetary resources allocated to them remain relatively small (Bastagli, Coady, and Gupta, 2012).

mortality rate, infant mortality rate, percentage of low-birthweight babies, and school dropout rates are worse in countries with high corruption (Gupta, Davoodi, and Tiongson, 2002).

III. CALIBRATING THE SHORT-TERM IMPACT OF FISCAL ADJUSTMENT ON GROWTH

29. This section discusses how country teams have calibrated the impact of fiscal policy on growth, particularly in the short term. To what extent did the analysis of short-term fiscal multipliers rely on existing literature, IMF-wide guidance, or department or team analysis? Did the teams incorporate the growth-enhancing impact of changes in structure of taxes and expenditures in their analysis?

30. There is no official IMF-wide guidance to staff on fiscal multipliers, although a Fiscal Affairs Department (FAD) technical note (Batini and others, 2014) identified the key structural characteristics of an economy that influence the size of fiscal multipliers. Identified factors include trade openness, exchange rate regime, size of public debt, size of automatic stabilizers, and extent of labor market rigidities. This information helps teams to classify a country's first-year multiplier into a low, medium, or high category. The results may be fine-tuned for the economy's cyclical position and monetary policy stance. Estimates derived in this way—labeled the “bucket approach”—are broadly in line with those found in the empirical literature as discussed in Kim and others (2021).¹⁰ In emerging market and LICs where data are less than perfect, the bucket approach has provided country teams with a cross-check to assess the validity of their country-specific empirical estimates.

31. Country teams are now more aware of the potentially large short-term impact of fiscal adjustment on growth in a program in a crisis context. The seminal paper by Blanchard and Leigh (2013) and the ensuing debate on underestimation of fiscal multipliers in 26 advanced economies during 2009–12 had a major influence on IMF staff. The authors found a negative relationship between fiscal consolidation forecasts and subsequent growth forecast errors, suggesting that actual fiscal multipliers were larger than those assumed when making projections for these countries during the post-GFC period.¹¹ For most European programs agreed on following the GFC, the starting assumption of a short-term multiplier was 0.5, whereas the actual multipliers were larger than 1.0 because of the constraint imposed by zero-lower bound in these countries at that time and the limited scope for countercyclical monetary policy.

¹⁰ This approach classifies countries into three groups (low, medium and high multipliers) based on structural characteristics of countries, such as whether the economy is open or closed, the size of automatic stabilizers and public debt, and the quality of revenue and expenditure management systems. Kim and others (2021) found for a sample of 131 IMF-supported programs over 2008–19 that multiplier assumptions used in initial program design and program updates were both broadly consistent with the estimates in the literature.

¹¹ The crisis program review (IMF, 2015c), which covered 27 program countries including those in the Euro Area (Greece, Ireland, Portugal, and Cyprus), found that fiscal multipliers were larger than programmed during the three years following the start of the program. In fact, growth forecast errors were larger in programs that envisioned larger fiscal adjustments. A similar conclusion is reached by the 2018 Review of Program Design and Conditionality (IMF, 2019d).

32. The African department has estimated fiscal multipliers for sub-Saharan Africa (IMF, 2017), specific program countries (e.g., Cameroon) (IMF, 2018a), and the Economic Community of Central African States (IMF, 2017) and has discussed these results in program documents (e.g., Cameroon) (IMF, 2018b). Expenditure multipliers were in general found to be higher than revenue multipliers, and within expenditures, public investment multipliers are larger (Arizala and others, 2020). For oil-producing countries, expenditure multipliers are somewhat lower, reflecting spending inefficiencies and leakages. The revenue multipliers are found to be small in Sub-Saharan Africa, suggesting that a fiscal consolidation strategy centered on raising domestic revenues does not hurt short-term growth and provides resources over time for growth-enhancing productive spending. These results have been used in program discussions with the authorities as noted, for example, in case study of Cameroon (Pinon-Farah and others, 2021).

33. Despite increased awareness about the importance of fiscal multipliers in recent years, fiscal multipliers are not discussed widely in IMF program documents, although DSA's for PRGT programs incorporate some checks on the consistency of fiscal adjustment with projected growth. It appears that, to a large extent, staff continues to rely on educated guesses particularly in countries (e.g., certain fragile states) where even minimal information to estimate fiscal multipliers is lacking. Fiscal multipliers are explicitly mentioned in only about 15 percent of program documents (IMF, 2019d). This is supported by evidence presented in the case studies. For example, assumptions regarding short-term fiscal multipliers are not mentioned in the program documents of Egypt, Honduras, Latvia, Malawi, Pakistan, Romania, Senegal, Tunisia, and Ukraine.¹² In one case (Senegal), however, where short-term fiscal multipliers are not explicitly reported in program documents, staff did have a discussion about the likely output elasticities during dialogue with the authorities. Overall, this finding suggests that there was insufficient recognition of risks to growth arising from the assumption of too low fiscal multipliers.

34. That said, there are many reasons why growth outturns can deviate from projections other than the faulty use of fiscal multipliers. The expected short-term effects of fiscal adjustment do not materialize when confidence effects—which the literature has emphasized—deviate from program assumptions and/or when countries face unforeseen external shocks (e.g., Tunisia and Ukraine) or there is a lack of country ownership (e.g., Greece and Ukraine), so that program measures are not effectively implemented.¹³ On the other hand, confidence effects can be quite powerful. For example, the 2014 Honduras program envisaged a large upfront fiscal adjustment

¹² In the case of Jordan, the program documents note that revenue-based adjustment would have a lesser impact on growth relative to cuts in capital spending.

¹³ Credibility of government actions is enhanced by demonstrated seriousness to implement reforms. For example, the speed at which reforms are implemented could signal a government's commitment to reform.

that would lower sovereign spreads and accelerate growth—a result that was anticipated by the authorities and staff and realized under the program.¹⁴

IV. ATTENTION TO GROWTH IN FISCAL POLICY CONDITIONALITY

35. IMF-supported programs have typically incorporated reforms in revenue and expenditure structures aimed at strengthening countries' long-term growth prospects. Programs have supported such fiscal reforms by setting structural conditions (SCs), supported by IMF capacity building. This section discusses the nature and implementation of these fiscal SCs, based on 131 programs (including those considered precautionary) approved and completed between September 2008 and March 2020. The section then examines how IMF CD is associated with fiscal conditions in IMF-supported programs, recognizing that the IMF's capacity-building support has grown rapidly since 2008.

Fiscal Conditionality in GRA and PRGT Programs

36. Fiscal conditions are spread across quantitative performance criteria (QPC), indicative targets, and SCs.¹⁵ Fiscal conditions dominate IMF-supported programs: more than two-thirds of all conditions are fiscal in nature, with more than half taking the form of QPC and 40 percent constituting SCs.^{16,17} The discussion here is centered on SCs because of their critical role in influencing revenue and expenditure structure over time, although most are tagged as supporting fiscal adjustment rather than growth objectives.

37. Three-quarters of all QPC are fiscal, highlighting the importance of fiscal adjustment in achieving program targets. QPC are evenly spread across GRA and PRGT countries. Nearly two-thirds of fiscal QPC are in two areas: limiting the fiscal deficit and restraining domestic and external arrears. The rest of QPC pertain largely to wage outlays, priority spending, social assistance, social spending, and tax collections.

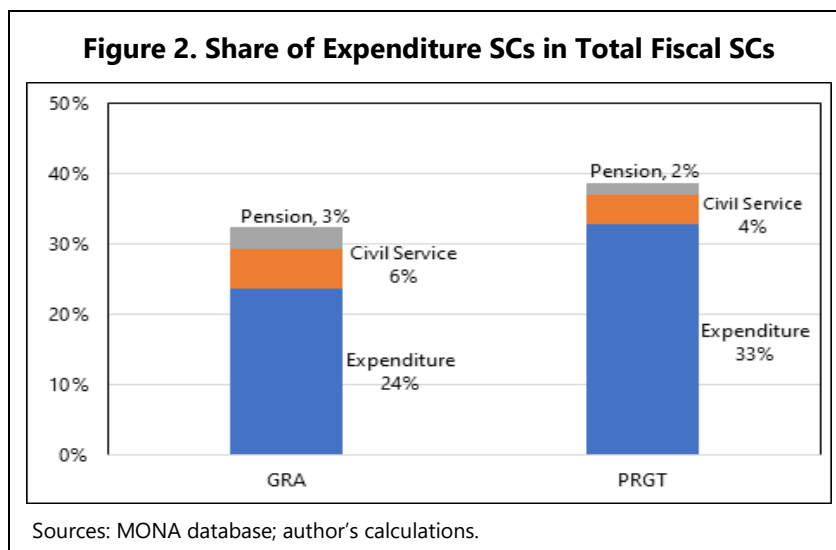
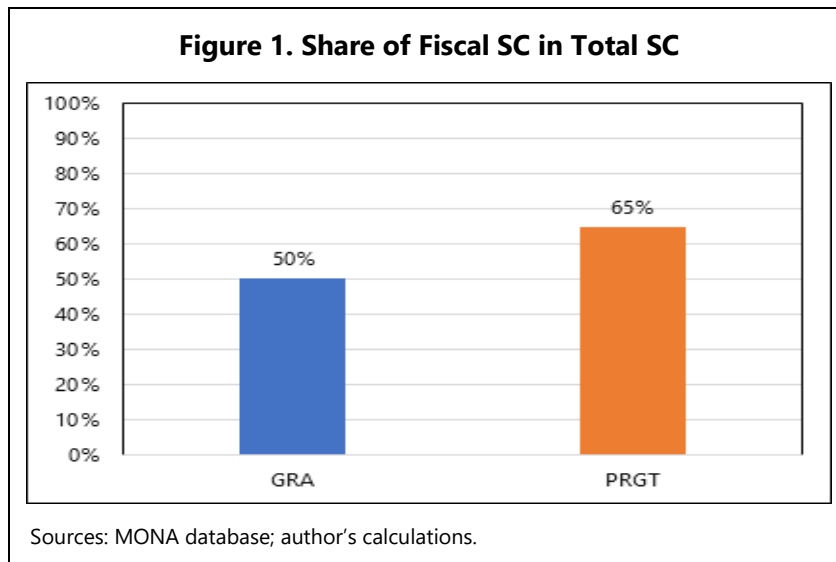
¹⁴ Relatedly, Kim and others (2021) found for a sample of 75 program countries over 2008–19 that optimism bias in short-run growth projections is on average smaller for large fiscal adjustments than for small or moderate adjustments. This finding suggests that large fiscal adjustments can entail positive confidence effects which help to offset income effects at least in part.

¹⁵ QPCs are conditions that are under the control of government officials and can be measured by economic indicators; they must be satisfied (or waived) to allow purchases under the program conditional on performance. Indicative targets also are quantitative measures that could be set in addition to QPC to assess progress in meeting program objectives and are sometimes set when QPC cannot be used due to data unreliability. These targets might be converted into QPC as uncertainty lessens, with some modifications. SCs, on the other hand, are not quantifiable and are not used as conditions that must be met (or waived) but they are used as critical markers to assess progress with implementation of policy actions included in a program.

¹⁶ QPC encompass conditions on fiscal balance, domestic arrears, general or central government expenditure, wage outlays, priority spending, social assistance, social spending, and tax collections.

¹⁷ Consistent with the approach adopted in a 2018 review of conditionality (IMF, 2019d), conditions included in the analysis are only those whose implementation status is known with certainty, that is, conditions that were met, met with delay, or not met.

38. Fiscal SCs dominate PRGT-supported programs given the criticality of building and strengthening fiscal institutions in LICs. Fiscal SCs constitute two-thirds of all SCs in PRGT-supported programs in contrast to one-half in GRA-supported programs (Figure 1).¹⁸ This proportion is reflected in SCs covering actions related to revenues, expenditures, debt, civil service reform, and fiscal transparency in PRGT countries. However, there are more SCs on budget preparation and pensions in GRA-supported programs. Expenditure conditions narrowly defined are also more prevalent in PRGT-supported programs (Figure 2).



¹⁸ Revenue measures include tax policy and administrative reforms including those in customs, while expenditure measures comprise those pertaining to public procurement law/process, audit, single treasury account, and other public financial management issues. Expenditure issues defined in this way do not include debt management, pension and civil service, and education and health-sector reforms.

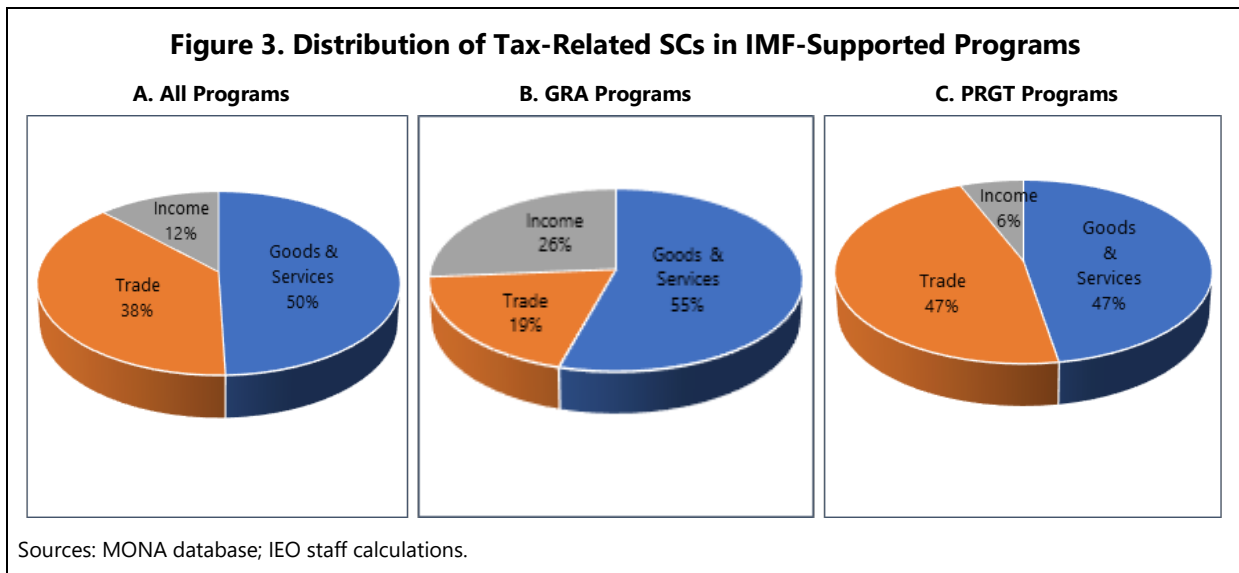
39. Pension and civil service conditionality tends to play a larger role in GRA programs than PRGT programs. In countries supported by PRGT programs, public pension schemes are typically limited to the civil service and may not pose as much of a risk to fiscal sustainability as in countries with GRA programs with more mature and well-developed pension systems. This has meant a larger number of pension conditions in GRA programs. Surprisingly, there are more conditions on civil service reforms in GRA programs.

40. Fiscal SCs also cover strengthening of budget preparation, debt management, and fiscal transparency. Conditionality on fiscal transparency is more prevalent in PRGT programs given the weaknesses in public financial management systems of LICs.¹⁹ Weak public financial systems have been linked to widespread leakages of public resources and associated corruption (MF, 2016). As noted in Section II, widespread corruption can undermine the implementation of policies to promote inclusive growth.

41. On the revenue side, there is a larger number of administrative measures in PRGT-supported programs. This is understandable given the emphasis on mobilizing more domestic resources in PRGT countries to finance the Sustainable Development Goals by building new or strengthening existing revenue institutions. Conditionality on tax administration has almost the same impact on revenue performance as conditionality on tax policy (Crivelli and Gupta, 2016).

42. The bulk of the revenue conditionality in IMF-supported programs has focused on taxes on goods and services, followed by conditionality on taxes on international transactions and on income (Figure 3). The focus on broad-based consumption taxes, such as the VAT, not only has helped strengthen tax administration but also has supported the development of growth-friendly taxes along the lines discussed in Section II (Arnold and others, 2011; Acosta-Ormaechea, Sola, and Yoo, 2018). Since trade taxes still constitute around one-fifth of the total tax take in PRGT countries, conditionality on these taxes has taken as much importance as on taxes on goods and services. It appears that little attention has been paid to developing taxes on income in PRGT countries. Greater focus of conditionality on taxes on income could have been more consistent with emphasis on promoting inclusive growth. In general, revenue measures have focused on broadening the tax base including by curtailing exemptions and enhancing tax compliance through strengthened revenue administration (IMF, 2019d).

¹⁹ Fiscal transparency includes publication of financial statements of public institutions including state-owned enterprises. It also includes publication of details of infrastructural project costs/bids, publication of arrears and budget execution reports, passing and presentation of fiscal responsibility law, and asset disclosures of cabinet members.



43. The implementation rate of fiscal SCs has been high overall, but most of the benchmarks are not classified as high depth.²⁰ PRGT programs performed slightly worse at 69 percent of conditions met compared to 77 percent in GRA programs (Figure 4).²¹ These high implementation rates of SCs are not adjusted for the depth and durability of conditions.²² When grouped into high-, medium-, and low-depth categories, only one-tenth of fiscal conditions are classified as high depth, with their implementation rate in PRGT programs somewhat lower than in GRA programs (Figures 5 and 6). In both program types, only 2 percent of fiscal SCs are categorized as directly growth oriented and four-fifths tagged as supporting fiscal adjustment (Figure 7).²³

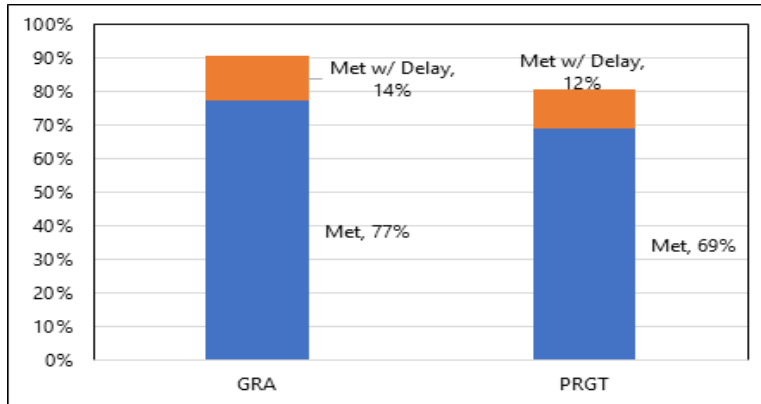
²⁰ Overall, a higher number of SCs is associated with a lower average rate of SC implementation. See Kim and Lee (2021) for details.

²¹ For all SCs (including fiscal), the implementation record of GRA-supported programs is better than that of Poverty Reduction and Growth Trust (PRGT)-supported programs (Kim and Lee, 2021).

²² High-depth reforms are those that entail permanent institutional changes, such as legislative changes (parliamentary approval of the new VAT law), or have a long-lasting impact (e.g., civil service reforms). Medium-depth reforms cover measures that lead to a significant change but are one-off in nature (e.g., budget approval or one-time change in tariff rates). Finally, low-depth reforms do not bring about a change by themselves but are steps toward a change that can pave the way for implementation of more critical reforms (IMF, 2019d).

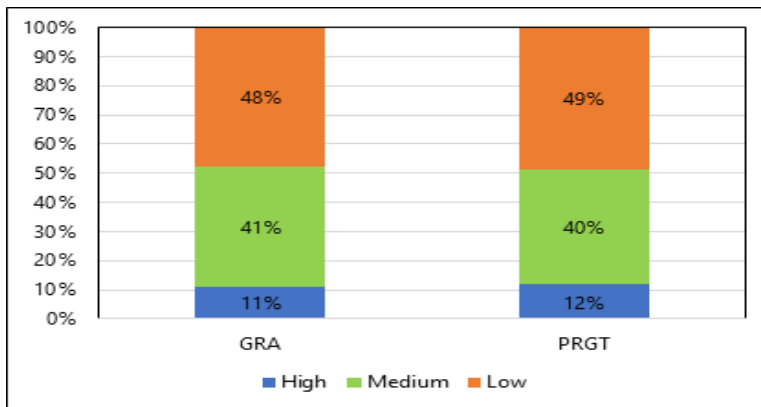
²³ Classification of SCs by content is based on IEO staff judgment. SCs categorized as supporting fiscal adjustment could also indirectly impact on growth. For instance, SCs related to tax reforms that seek to promote greater progressivity may help boost growth over time through increased generation of revenues for social spending.

**Figure 4. Share of Fiscal SCs Met
(Including met with delay in total fiscal SCs)**



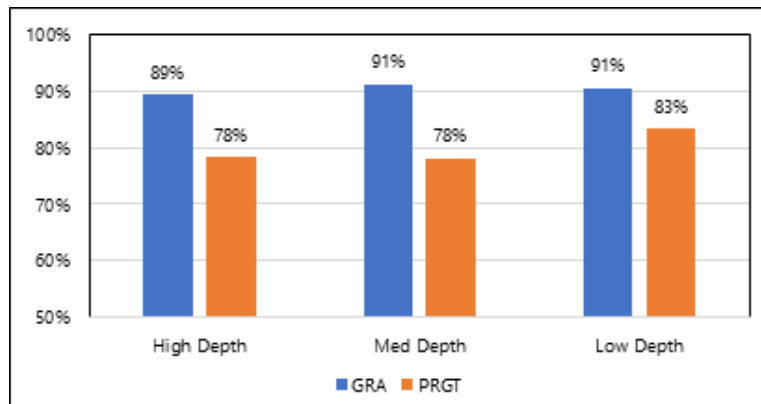
Sources: MONA database; IEO staff calculations.

Figure 5. Fiscal SC by Depth

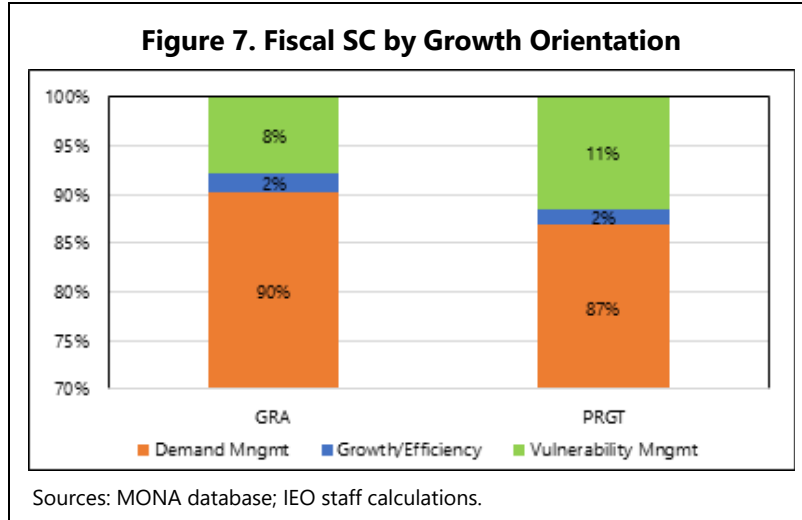


Sources: MONA database; IEO staff calculations.

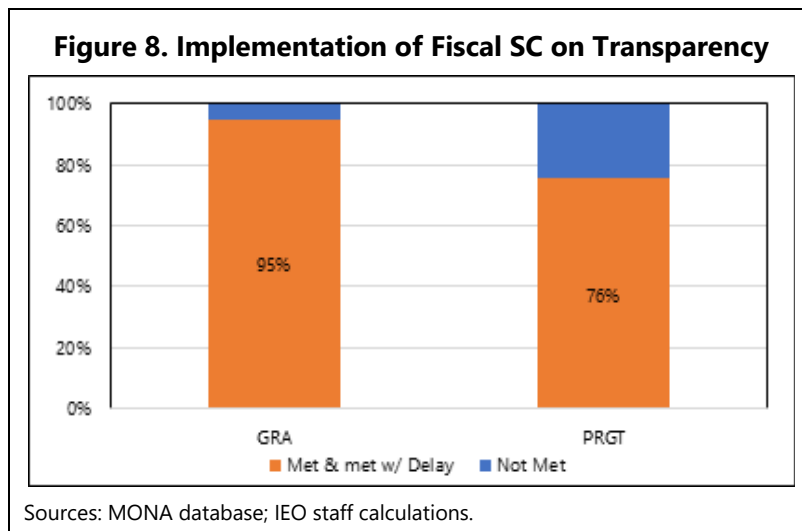
**Figure 6. Fiscal SC Implementation by Depth
(Met and met with delay)**



Sources: MONA database; IEO staff calculations.



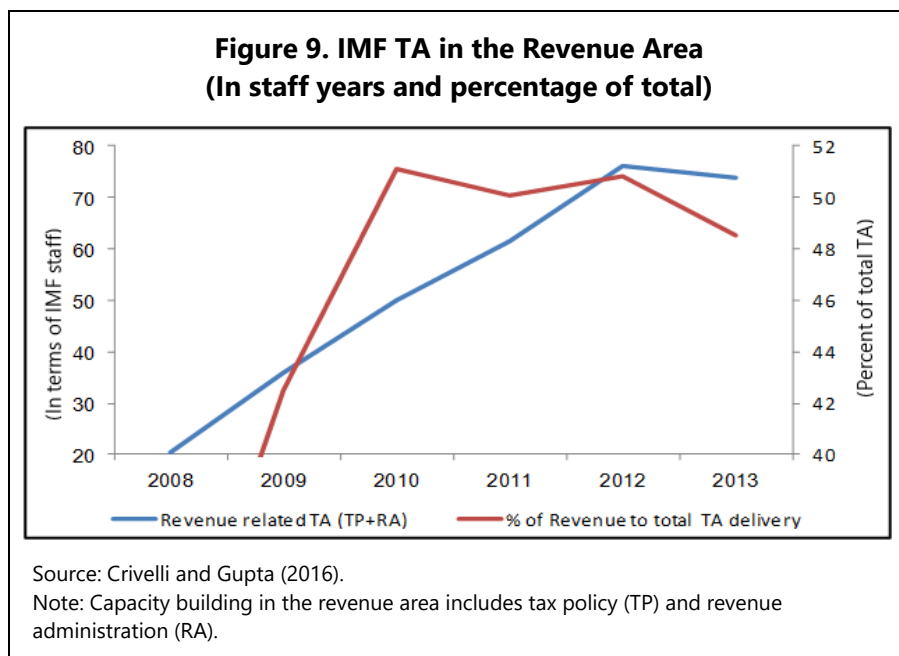
44. Meeting fiscal transparency conditionality in PRGT countries has been particularly problematic, with more than one-quarter of conditions not met (Figure 8). More recently, the IMF adopted a new framework on governance (IMF, 2018a) that calls for greater attention to be paid to strengthening public financial systems and enhancing fiscal transparency. Specifically, an interdepartmental Governance Working Group oversees detailed governance assessments for each member country, which inform both surveillance, program, and CD priorities. Staff are also producing detailed governance diagnostic reports for an increasing number of (mostly program) countries.



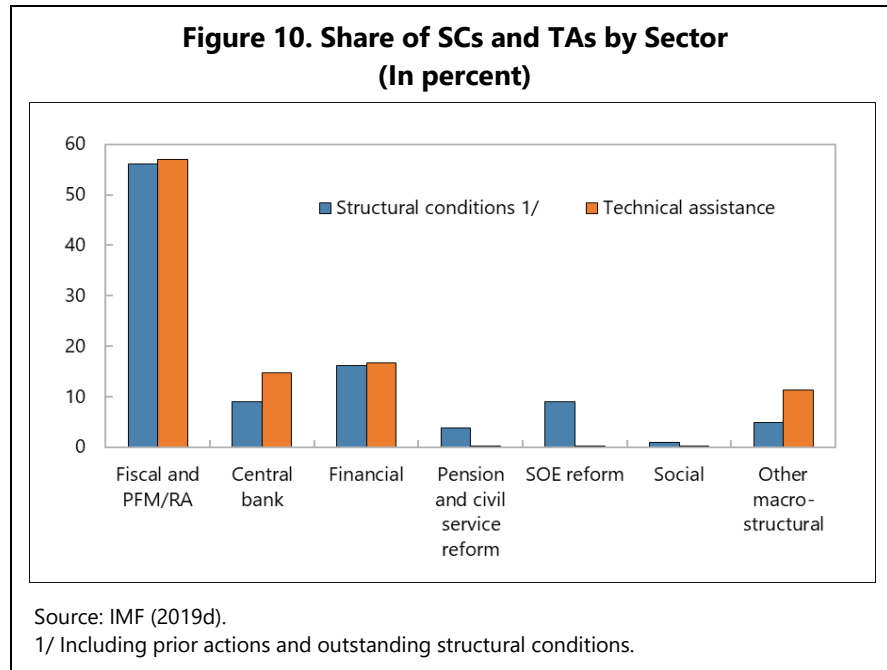
Fiscal Conditionality and IMF Capacity Development

45. The increased use of fiscal conditionality in GRA and PRGT programs since 2008 has been accompanied by growing IMF CD support to member countries. In recent years, the growth in fiscal CD has been particularly rapid; it expanded by more than 10 percent annually during

FY2015–18 and is projected to increase at this rate during the following three years (IMF, 2018a). In principle, the growing provision of fiscal CD by the IMF and other international organizations and donors should aid CD-receiving countries in designing and implementing fiscal reforms, particularly in a program context. IMF’s fiscal technical assistance (TA) has centered on two broad areas—domestic resource mobilization and public financial management—and much of the fiscal conditionality found in GRA and PRGT programs falls in these two areas. In the revenue area, growth in IMF conditionality in PRGT and GRA programs after 2008 reflects the importance of implementing tax reforms and the necessity of bolstering revenues in the aftermath of the global financial crisis. To support these efforts, the IMF’s capacity-building support in both tax policy and revenue administration since 2008 has grown sharply both as a share of IMF’s total support in the fiscal area and staff resources (Figure 9).

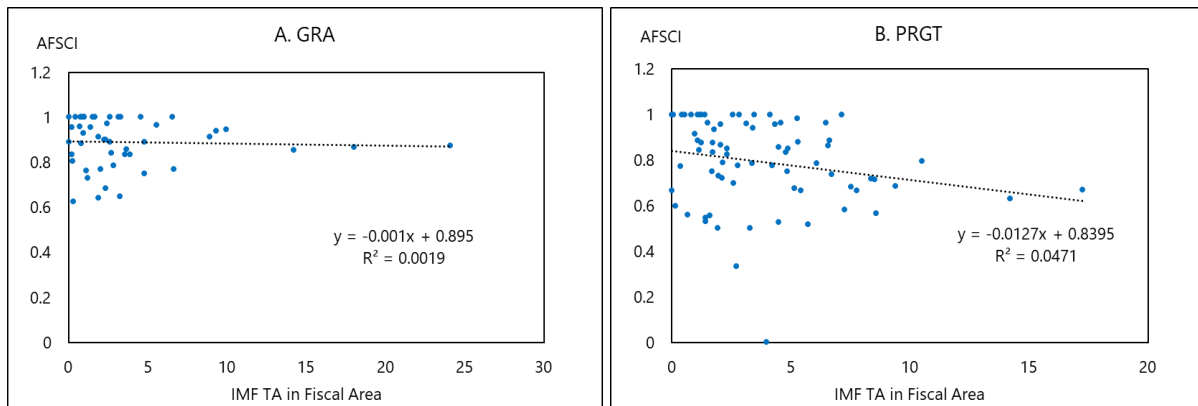


46. Drawing fiscal conditionality from CD is consistent with the IMF’s strategy of integrating CD with its surveillance and lending activities. This is corroborated by the 2018 review of IMF conditionality (IMF, 2019d), which found a high concentration of both fiscal SCs and IMF’s fiscal CD (Figure 10). The case studies prepared for this evaluation are also consistent with this conclusion. Fiscal CD constituted between one-third and two-thirds of all CD provided during the program period in several case study countries (e.g., Jamaica, Malawi, Senegal, and Ukraine). In most of these cases, the case studies found that CD was appreciated by country authorities in helping to implement programmed reforms. For example, IMF TA contributed to strengthening the capacity of the Ministry of Finance to formulate and implement fiscal policies in Latvia, and guided Malawi’s public financial management reforms following a major corruption scandal. In one instance (Ghana), however, the authorities found it difficult to implement SCs linked to extensive CD in a short period of three years, reflecting their inability to move at the rapid pace set out in the program.



47. Despite growing provision of fiscal TA in the program context and positive experience described in some case studies, it is not clear from the data that it has helped to improve implementation of fiscal reforms. It would be expected that increased interaction of country authorities with fiscal experts would aid implementation of SCs. However, Kim and Lee (2021) find that countries that receive more TA do not perform significantly better in implementing SCs, including fiscal. In fact, the bivariate relationship between the amount of fiscal TA provided and the average implementation score of fiscal SCs (AFSCI) is negative in both GRA and PRGT countries, with the relationship being more pronounced in the latter group of countries (Figure 11). While this bivariate result may reflect in part that fiscal TA is more likely to be provided for SCs that are more challenging to implement, the negative relationship or, more broadly, the lack of a positive and statistically significant relationship persists in a multivariate fractional logit analysis even after controlling for the average depth of fiscal SCs (AFSCD), the implementation capacity of the recipient country (measured by the World Bank's government effectiveness index), and the total volume of fiscal SCs (Table 1). It is worth noting that the relationship between fiscal TA provision and fiscal SC implementation is negative and statistically significant in PRGT countries in the full sample, although not when sample is confined to completed programs only. Overall, the lack of positive and significant relationship between fiscal TA and SC implementation is suggestive of the need to revisit the effectiveness of fiscal TA in supporting fiscal program implementation.²⁴

²⁴ The upcoming IEO evaluation on the IMF and Capacity Development will take up these issues in greater detail.

Figure 11. IMF TA and SC Implementation in Fiscal Area

Source: Kim and Lee (2021); IEO staff estimates.

Note: AFSCI denotes the average implementation score of fiscal SCs; IMF TA is measured in full-time-equivalent (FTE) units.

Table 1. Fiscal TA and SC Implementation: Fractional Logit Regressions

	All Programs			Completed Programs		
	Full (1) AFSCI	GRA (2) AFSCI	PRGT (3) AFSCI	Full (4) AFSCI	GRA (5) AFSCI	PRGT (6) AFSCI
Fiscal TA	-0.018 (0.01)	0.021 (0.01)	-0.061* (0.017)	-0.012 (0.012)	0.019 (0.023)	-0.017 (0.015)
AFSCD	0.199 (0.49)	1.488 (0.588)	-0.185 (0.665)	-1.231 (0.569)	1.815 (0.895)	-2.137 (0.646)
GEI	0.123 (0.066)	-0.163 (0.114)	-0.203 (0.13)	0.249 (0.077)	-0.227 (0.129)	0.187 (0.112)
No. of FSCs	-0.019* (0.005)	-0.022* (0.006)	-0.01 (0.007)	-0.012 (0.005)	-0.014 (0.007)	-0.005 (0.007)
Constant	1.776** (0.296)	1.254 (0.38)	1.587 (0.419)	2.355*** (0.332)	0.914 (0.567)	2.553*** (0.412)
N	123	50	73	80	30	50
Pseudo-R ²	0.051	0.064	0.067	0.063	0.066	0.085

Sources: MONA database; IEO staff estimates.

Notes: AFSCI and AFSCD denote the average implementation and depth scores of fiscal SCs, respectively. Fiscal TA is measured in FTE units. GEI refers to the 3-year average prior to the program of the government effectiveness index published by the World Bank. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

48. Notwithstanding calls for strengthening links between CD and the IMF's other core activities, Fiscal Affairs Department (FAD, the department responsible for fiscal CD), has had little role in assessing compliance with fiscal SCs. A review of back-to-office reports of the IMF's fiscal missions to 17 case study countries during 2008–19 shows that with a few exceptions, fiscal CD missions did not discuss the status of fiscal reforms in IMF-supported programs increasingly drawn from CD advice. This is surprising when structural reforms covering domestic resource

mobilization and public financial management are core to the department's CD work.²⁵ More recently, however, the virtual working environment required by the COVID-19 pandemic has enabled FAD experts to participate in area department meetings and provide input on whether SCs derived from fiscal CD have been met.

V. PROGRAM-RELATED OUTCOMES IN TAX MOBILIZATION AND EXPENDITURE COMPOSITION

49. This section examines trends in fiscal performance in 131 IMF-supported programs initiated and completed between September 2008 and December 2019. It assesses programs' impact on the composition of revenues and expenditures, that is, whether the composition has become more growth promoting and redistributive than before the program. It then proceeds to relate these trends to the use of fiscal conditionality.

Revenue Performance in IMF-Supported Programs

50. The evidence suggests that during the period covered IMF programs have had a positive impact on overall tax performance (Table 2). Moreover, they have promoted greater reliance on taxes on goods and services, which include the VAT—a tax that is more friendly toward promoting growth (see also Crivelli and Gupta, 2016). The total impact seems to be larger in PRGT than in GRA programs, particularly countries where revenue ratios were below the group average. It is noteworthy that better revenue performance is not attributable to higher tax rates—rather to long-lasting improvements in tax design and administration to broaden the tax base (Crivelli and Gupta, 2018). That said, revenue performance has been weak in countries with high corruption and in fragile states (Baer and others, 2021). This result could be attributable to weaknesses in basic institutions and administrative capacity in these countries, which makes it harder to implement major tax revenue reforms, suggesting that in fragile states, the design of revenue conditionality and CD should have a long-term focus.²⁶

51. The evidence of post-program improvements in tax mobilization is particularly marked in PRGT countries (see Table 2).²⁷ In comparison with the pre-program period, the tax-to-GDP ratio rose by 1.1 percentage points on average in the post-program period. The increase stems largely from taxes on goods and services. The median tax-to-GDP ratio increased by 0.6 percentage points of GDP (1.5 percentage points of GDP for completed programs) between pre-program and post-program, although dispersion around the median rose during the latter period (Figure 12).

²⁵ It is unclear if the practice of signing off FAD mission briefs by area departments since 2017 has led to increased focus of FAD TA missions on structural reforms in the context of program design.

²⁶ This result is similar to that found in a 2018 Review of Program Design and Conditionality (IMF, 2019d).

²⁷ The average duration of GRA and PRGT programs is 2.7 years, with some programs going off-track within four months of the start and others lasting six years as programs are extended after going off-track. An average program duration of less than three years is not sufficiently long for a country's revenue and expenditure structure to change. In any case, caution needs to be exercised in interpreting these results because the analysis does not control for other considerations that affect revenues and expenditures.

**Table 2. Tax and Expenditure Trends Associated with IMF-Supported Programs
(In percent of GDP)**

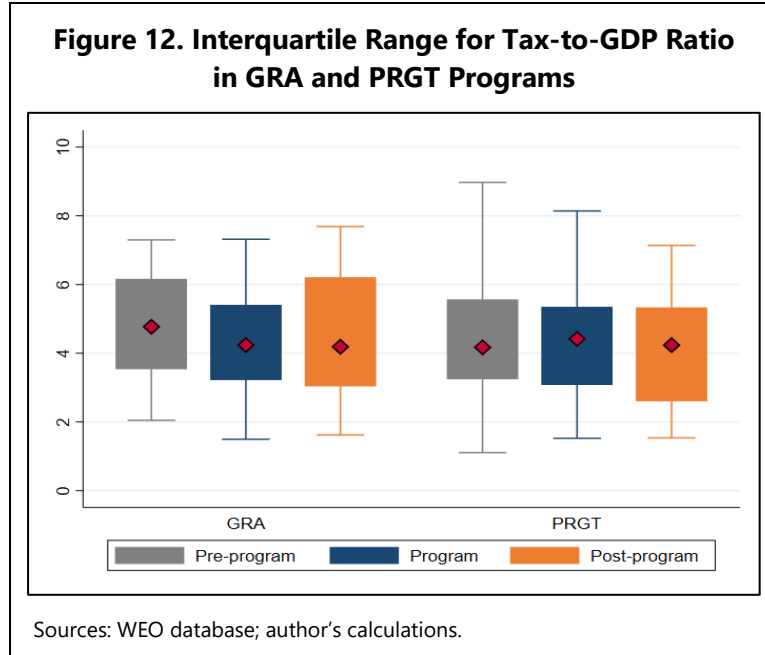
	PRGT Programs			GRA Programs		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Taxes	13.6	14.4	14.7	20.1	20.5	20.4
o/w						
On income, profits, and capital gains	5.5	6.3	5.6	9.8	11.3	9.7
On goods and services	3.7	4.5	4.3	7.6	6.9	8.2
On international trade and transactions	2.7	2.6	2.7	2.3	2.1	1.8
Social contributions	0.9	0.9	0.8	6.9	6.6	6.3
General government total expenditure	25.1	24.8	26.2	35.7	33.7	33.0
General government expense	17.4	16.8	17.2	32.2	29.9	30.1
o/w						
Compensation of employees	6.8	6.4	7.3	9.5	9.3	9.2
Purchases/use of goods and services	4.3	4.1	3.7	5.6	5.6	4.9
Interest	1.2	1.5	1.6	2.9	2.9	2.8
Social benefits	2.6	3.0	2.2	9.4	9.2	9.3
Capital expenditure	7.3	7.4	8.4	5.0	4.5	3.7
Net acquisition of financial assets	0.1	0.4	0.1	0.6	-0.1	-1.4

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year. For consistent comparison, the sample is restricted to those programs for which actual data are available for the entire three-3-year post-program period.

52. Compared to PRGT-supported programs that went off-track, tax mobilization in countries that stayed on course has been substantially stronger. In contrast to an unchanged tax-to-GDP ratio between the pre- and post-program periods in countries where programs went off course, tax mobilization increased by almost 3 percentage points of GDP on average in countries that experienced normal program completion (Tables A1 and A2). In addition to higher revenues from taxes on goods and services, the latter countries collected more revenues from taxes on income, thereby making the tax systems in these countries more progressive by bringing individuals and businesses with rising incomes into the tax net. A similar trend emerges when the sample is limited to fragile states (Table A3).²⁸

²⁸ A fragile state is defined as one that has a World Bank's Country Policy and Institutional Assessment (CPIA) country rating of 3.2 or less and/or one where there has been a UN and/or regional peacekeeping or political/peace-building mission during the past three years. The CPIA measures a country's effort to improve its institutions and policies to reduce poverty; country performance is rated on a scale of 1 to 6, with 1 being *weak* and 6 being *strong*.



53. Turning to GRA-supported programs, the average tax-to-GDP ratio remained broadly unchanged after programs ended, but the tax structure became more growth friendly in the post-program period. The dependence on distortionary trade taxes fell, while reliance on taxes on goods and services increased by 0.6 percentage points of GDP. As shown in the box plot, the median tax-to-GDP ratio increased by 0.5 percentage points of GDP between pre-program and post-program. As in PRGT-supported programs, dispersion around the median increased in the post-program period.

54. The tax mobilization effort between the pre- and post-program periods is not different when GRA countries are disaggregated into programs that completed normally or were implemented in crisis situations (Table A1 and A4). In fragile states with GRA-supported programs, however, the revenue position worsened in the post-program period (Table A3). The opposite transpired in programs that went off-track; this is because El Salvador, Greece, and Suriname generated higher-than-programmed revenues (Table A2).

Spending Performance in IMF-Supported Programs

55. On the spending side, total general government outlays increased in PRGT-supported programs, buttressed by higher tax revenues (see Table 2). Moreover, there was a shift in composition of spending in favor of capital projects: capital spending as a share of GDP rose by an average of 1 percentage point after the program—a desirable outcome for addressing society's infrastructure needs. With the rising provision of social services, outlays on compensating government employees increased as a share of GDP but remained broadly unchanged at one-third of total government spending in the post-program period. Reflecting rising debt-to-GDP ratios, interest outlays rose by 0.4 percent of GDP on average. This implies

that spending on the purchase of goods and services was squeezed, affecting the quality of services provided to the population. The overall results are similar for fragile states but not as strong as they are for all PRGT countries (see Table A3).

56. In PRGT-supported programs that stayed on course, general government spending increased more than in all programs (see Table A1). Higher tax mobilization facilitated larger spending increases with an over 3 percent of GDP rise in capital outlays in the post-program period. The opposite is found in programs that went off-track. Thus, the overall tax/expenditure performance of on-track PRGT-supported programs is significantly stronger.

57. In contrast, average government spending declined in the post-program period by around 3 percentage points of GDP in GRA-supported programs, reflecting the need to contain the size of government to bring down the fiscal deficit and to create room for the private sector to grow. Both compensation to employees and purchases of goods and services fell. In addition, capital spending declined by 1.3 percentage points on average, with consequences for the future growth prospects of these countries. A similar expenditure pattern in the post-program period emerges in programs completed normally, in those that went off course, and in fragile states and crisis countries.

58. Trends in social spending (comprising education and health) differed between GRA- and PRGT-supported programs. In GRA-supported programs, the share of health spending increased in the post-program period, both as a proportion of GDP and in the total budget, suggesting increased prioritization of the health sector in government budgets (Table 3). The share of education in budget allocations remained unchanged in GRA-supported programs. In PRGT countries, where such spending is relatively low, health spending remained unchanged as a share of GDP while spending on education declined somewhat after the program ended. The share of both sectors in budget allocations lessened. The interquartile range for education and health spending in GRA and PRGT countries shows a similar pattern (Figures 13 and 14). These results occurred even though IMF conditionality has sought either to protect or to raise such spending in PRGT countries. The 2018 review of IMF conditionality (IMF, 2019d) concluded that education and health spending was *broadly* maintained as a share of GDP and total government outlays in IMF-supported programs during 2011–17.²⁹ The longer time period covered by this evaluation (2008–19) probably explains why the observed changes in social spending are somewhat

²⁹ The effects of IMF programs on education and health spending have been widely debated in the literature. Some studies argue that austerity measures and particularly conditionality on the wage bill have lowered such spending (Ooms and Hammonds, 2009; Rowden, 2009; MacDonald, 2007). Clements, Gupta, and Nozaki (2013) show that spending in the education and health sectors increased at a faster pace in countries supported by IMF programs than in other developing economies without IMF programs. IMF programs have helped increase social spending through three channels: higher growth during the program period, which raises domestic revenues (Gupta and others, 2000); conditionality in programs to protect social spending; and catalyzing of foreign aid and investment during the program period, which increases overall fiscal space. Somewhat similar results are found by IMF (2017). The focus of these studies was on assessing the impact of IMF-programs on social spending after controlling for other factors that impact such spending and endogeneity between IMF programs and social spending. The data presented in Table 3 is not adjusted for any of these considerations as noted in footnote 23.

different from those presented in the conditionality review. There was a modest decline in military spending in both groups of countries.³⁰

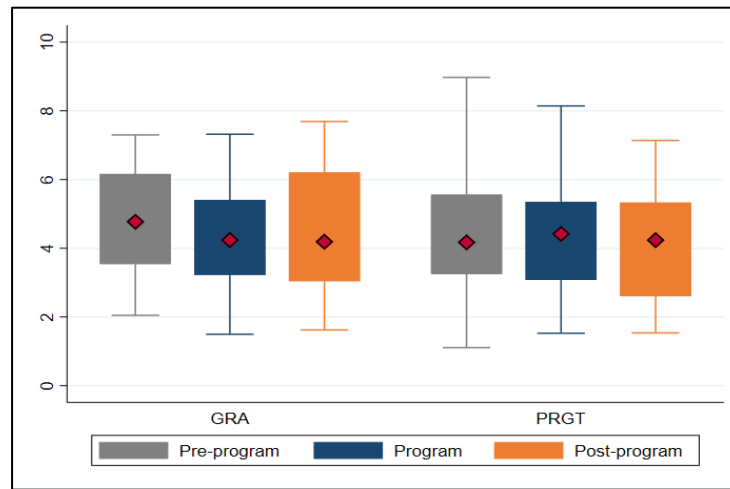
Table 3. Trends in Government Expenditure by Function Associated with IMF-Supported Programs

GRA Programs						
Expenditure	In percent of GDP			In percent of Government Expenditure		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Health	3.5	3.5	3.6	10.2	10.3	11.3
Education	4.7	4.2	4.6	13.8	12.9	13.8
Military	2.1	2.0	1.6	6.9	6.8	6.1
PRGT Programs						
Expenditure	In Percent of GDP			In percent of Government Expenditure		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Health	1.9	2.0	1.9	7.1	7.7	6.3
Education	4.7	4.5	4.2	17.6	16.9	16.3
Military	1.7	1.7	1.6	7.1	7.4	5.9

Sources: World Development Indicators; author's calculations.

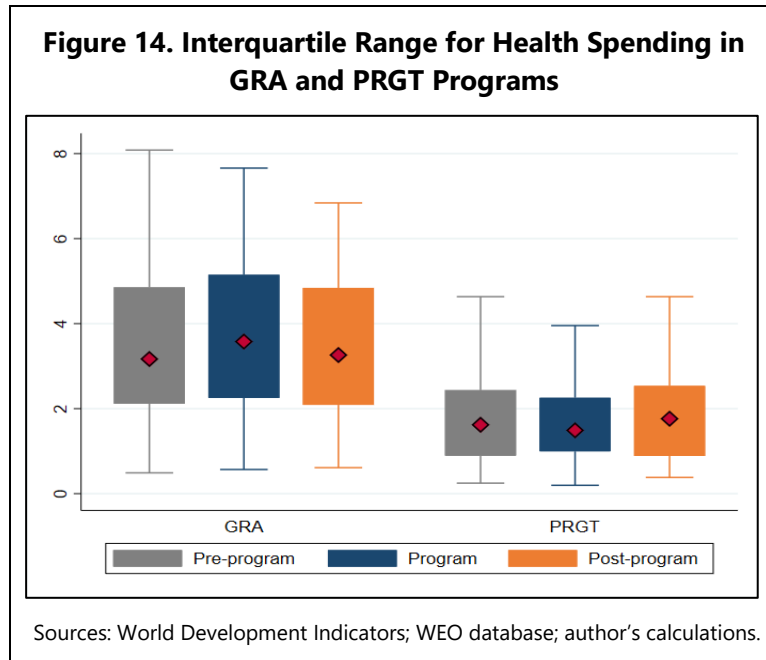
Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

Figure 13. Interquartile Range for Education Spending in GRA and PRGT Programs

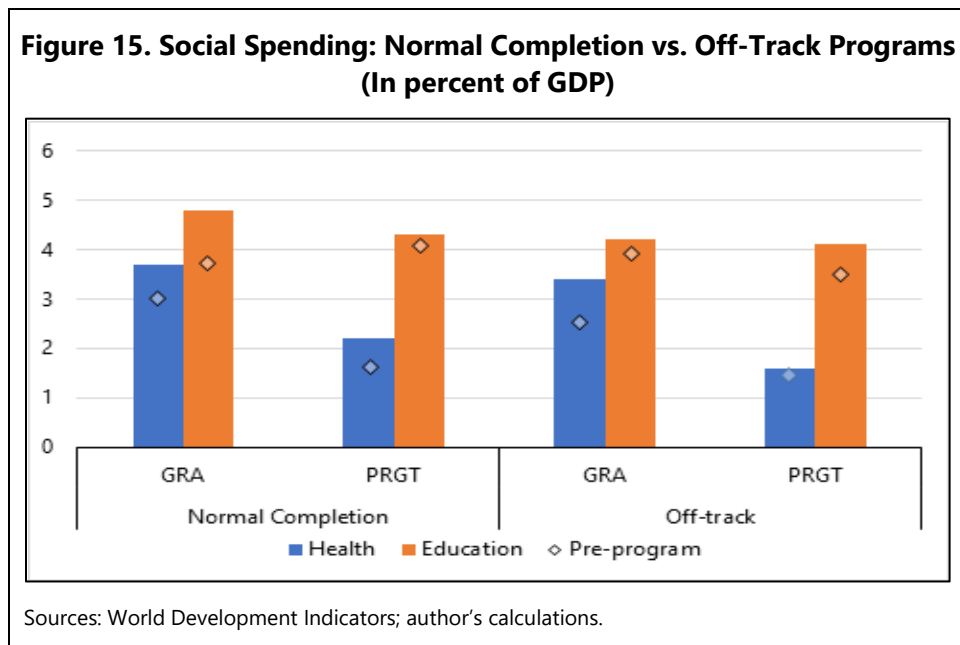


Sources: World Development Indicators; WEO database; author's calculations.

³⁰ A durable change in the composition of expenditures, including outlays on wages and social sectors, require medium-term reforms in areas where the World Bank rather than the Fund has core competency.



59. Programs that went off track showed particularly disappointing outcomes for health and education spending. For example, in GRA programs, education spending in relation to GDP in the post-program period is lower than pre-program in countries where programs went off track but was sustained in programs that were completed normally (Figure 15 and Tables A5 and A6). In PRGT programs, spending on education suffered in both normally completed and off-track programs while spending on health was sustained in normally completed programs but fell in off-track programs.



60. On occasion, short-term developments have impeded adherence to long-term goals. These adverse developments are attributable to two considerations. First, programs that have repeatedly gone off-track have diverted staff's attention from programs' long-term goals as the immediate aim has been to bring the program back on track, occasionally by implementing measures inconsistent with long-term growth objectives, such as cuts and delays in the public investment program as alternative corrective measures have been hard to find. Second, revenue shortfalls in PRGT countries have thwarted the goal of scaling up capital spending in these countries. As a result, growth-supporting spending did not increase by the extent programmed (IMF, 2019d).

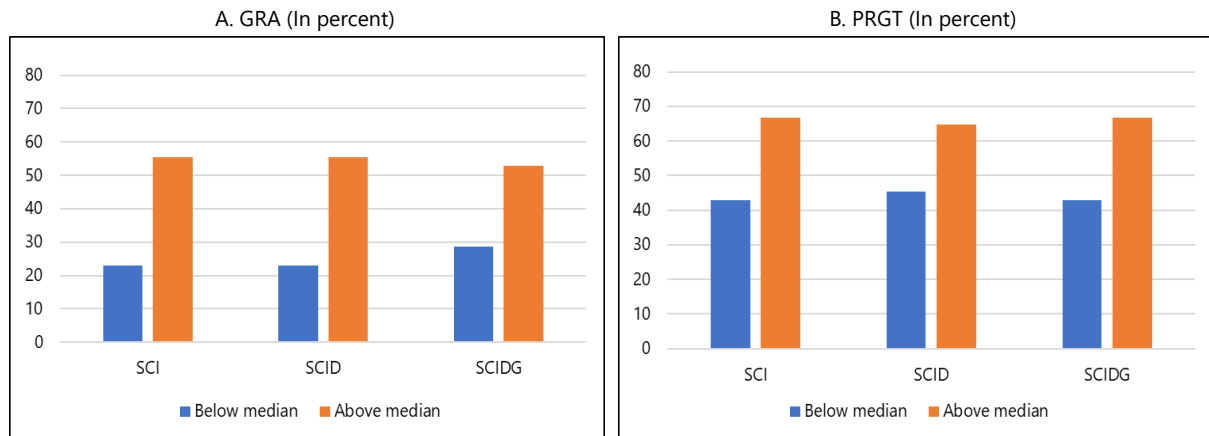
61. Although not reported here, there is some evidence that fiscal adjustment during the program period has helped strengthen policy outcomes in the post-program period. Countries implementing IMF-supported programs were able to achieve a stronger primary fiscal balance in the post-program years than otherwise. Increased revenue collection during the program had more durable influence on post-program primary balance than expenditure cuts. The post-program strength of fiscal policy is generally weaker in PRGT-supported programs and in programs that went off-track.

Fiscal Conditionality and Fiscal Performance

62. Stronger compliance with and higher quality of fiscal SCs have been associated with more growth-friendly fiscal outcomes.³¹ Dividing the sample of programs with overall fiscal consolidation into two subgroups depending on whether fiscal SC scores are above (first group) or below (second group) the cross-country median, the share of programs where fiscal adjustment relied more on revenue increases than expenditure cuts is on average 24-32 and 19-24 percentage points higher in the first group than in the second in GRA and PRGT programs, respectively (Figure 16).

63. Higher fiscal SC scores have on average been positively and statistically significantly associated with higher social (health and education) spending, while a positive but insignificant association is found between fiscal SC scores and public investment in both GRA and PRGT programs (Figure 17). Moreover, the impact of fiscal SCs on social spending depends not only on the implementation (Figure 17, Panel B) but also on the depth and growth-orientation of fiscal SCs (Figure 17, Panels D and F).

³¹ Based on the literature, a growth-friendly fiscal outcome is defined as a program where fiscal adjustment relies more on revenue increases than expenditure cuts.

Figure 16. Share of Programs with Growth-Friendly Fiscal Outcomes

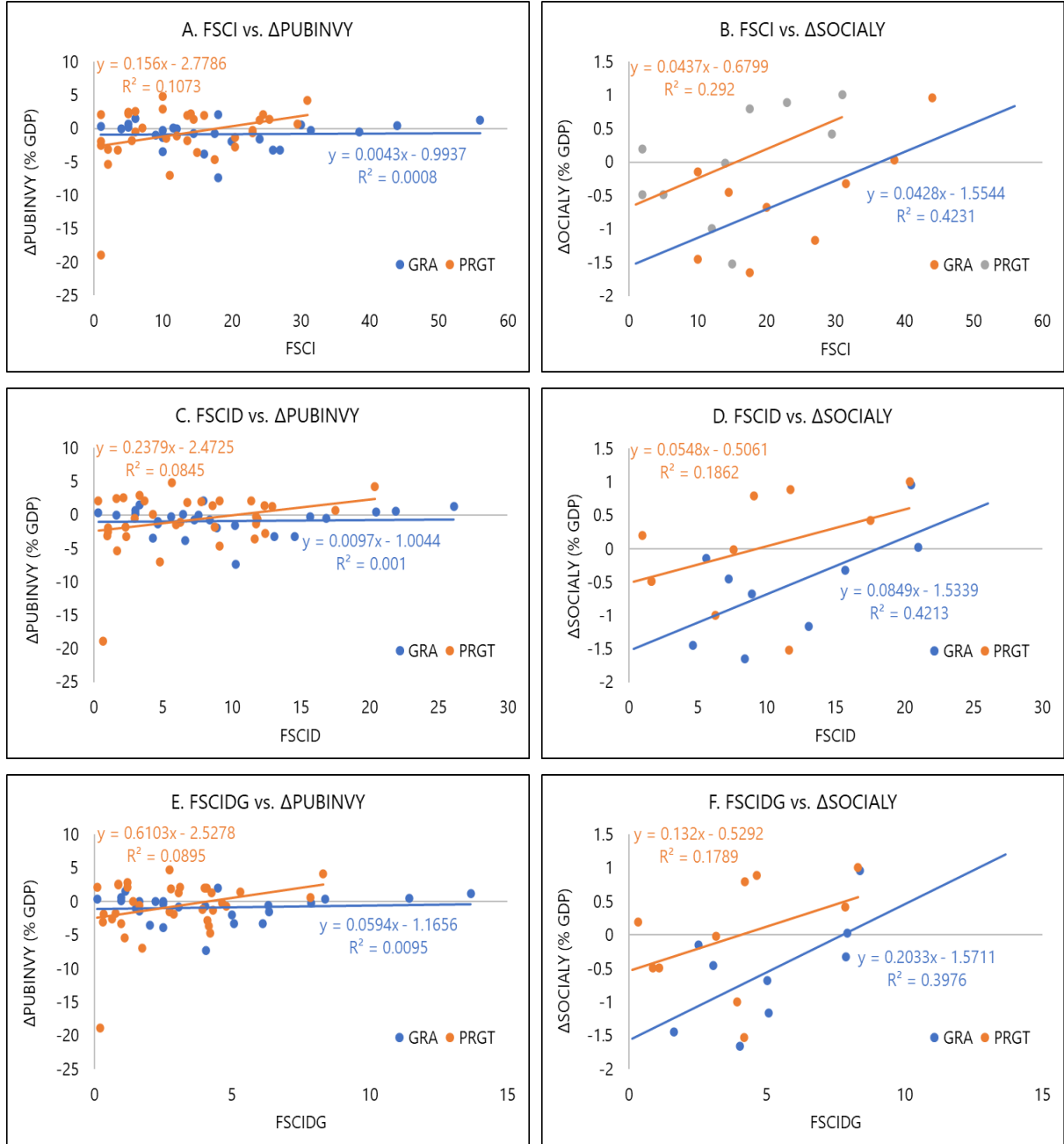
Sources: MONA database; IEO staff calculations.

Note: Growth-friendly fiscal outcome is defined as a program where fiscal adjustment relied more on revenue increases than expenditure cuts; FSCI denotes the aggregate index for fiscal SC implementation score; FSCID and FSCIDG denote the aggregate composite indices for implementation and depth scores and for implementation, depth and growth-orientation scores, respectively.

64. By contrast, conditionality targeted at protecting social spending in IMF-supported programs has not contributed to raising post-program spending on education and health in relation to GDP in both GRA and PRGT countries. Such conditionality, however, may have helped in shielding education and health spending in budget negotiations in the context of program discussions. A recent study (Gupta, and others, 2020) finds that SCs to strengthen overall public financial management (PFM) systems are more effective in raising social spending in the long term as compared to the short-term focus of QPC and indicative targets on social spending (Figure 18). Conditions on the accumulation of arrears and control over extrabudgetary spending, budget execution, and accounting and financial reporting are associated with higher health and education spending in IMF-supported programs.³² A reduction in arrears and control over extrabudgetary spending leads to increased availability of resources for productive spending including spending on education and health. Improved budget execution reduces the risk of diversion of funds allocated to social sectors and the possibility of budget arrears from emerging; this ensures that social sectors receive their budgeted allocations. Improvements in accounting and financial reporting ensure that countries allocate and track resources on the basis of a clear budget classification and associated chart of accounts, allowing budgeted increases in education and health spending to come to fruition. Thus, SCs to strengthen PFM and SCs designed to protect social spending in the short term could complement each other in securing a durable increase in social spending over time.

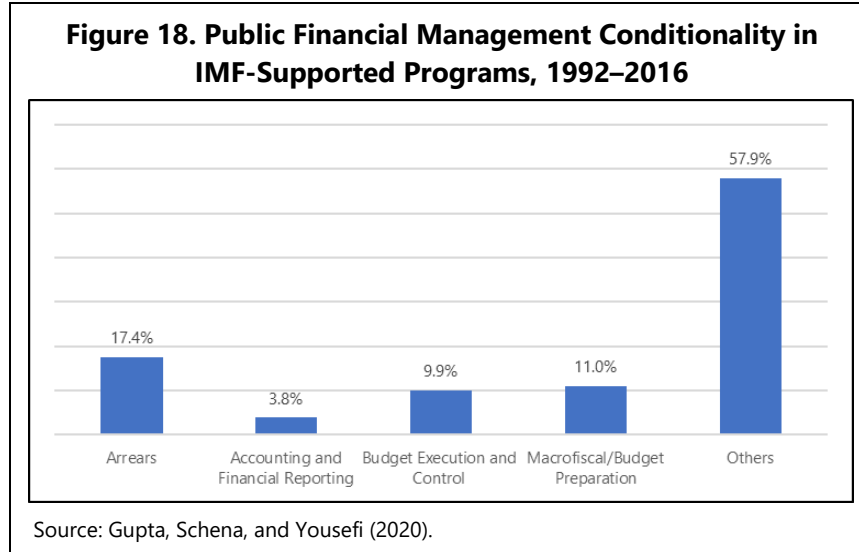
³² Conditions on the accumulation of arrears and control over extrabudgetary spending are found in a number of case study countries (Benin, Cameroon, Grenada, Malawi, Romania and Senegal).

Figure 17. Fiscal SCs, Public Investment, and Social Spending



Sources: WEO database; IEO staff estimates.

Note: See Figure 16 for the definition of FSCI, FSCID and FSCIDG. DPUBINVY and DSOCIALY denote the cumulative change in public investment and social spending as a share of GDP during the program period.



VI. GROWTH IMPACT OF FISCAL ADJUSTMENT AND REFORMS

65. This section discusses the short- and medium-term growth impact of fiscal adjustment and reforms undertaken during the program, drawing on quantitative analysis in Kim and others (2021) which is based on program outcome data of the evaluation sample of IMF-supported programs.³³ The medium-term growth impact is assessed on the basis of the contribution to post-program potential growth of fiscal adjustment and reforms.

Within-Program Growth Impact of Fiscal Adjustment

66. During the program period, fiscal contraction is found to have a significant negative impact on growth. To be specific, the estimated short-run fiscal multipliers, proxied by the coefficient of the change in the primary balance in growth regressions, are on the order of 0.35-0.6 depending on specifications and sample programs.³⁴ Further, revenue increases are found to be more contractionary than expenditure cuts in the evaluation sample, which seems at odds with existing evidence in the literature. This latter finding suggests that successful efforts seems to have been made in the program context to focus expenditure cuts more on reducing inefficient and recurrent expenditures while minimizing, if not avoiding, cuts in productive capital spending.

³³ The estimation results reported in Kim and others (2021) are based on cross-section data of program period averages of growth deviations from a benchmark which corrects for the influence of exogenous external factors such as the terms of trade and trading partners' growth. The use of average growth deviation helps produce sharper estimates of fiscal multipliers on the one hand but limits the size of regression sample on the other. Given the relatively small sample size (87 data points in total including both GRA and PRGT programs), the estimation results are suggestive rather than definitive.

³⁴ In growth regressions, the primary balance is used in lieu of the structural primary balance given the limited data availability for the latter measure. As such, the estimated fiscal multipliers are only a proxy of fiscal multipliers which capture not only the growth impact of discretionary fiscal policy but also those of built-in stabilizers.

Post-Program Growth Impact of Fiscal Adjustment and Reforms

67. In the medium term, potential growth is found to be positively affected by structural fiscal reforms and strength of stabilization implemented during the program period. In this regard, three findings are notable. First, improved public debt sustainability achieved through debt reduction supported by fiscal adjustment during the program period has a positive impact on post-program growth (consistent with economic literature), albeit the impact is relatively small. Second, increased spending on public investment and social sectors during the program period helps improve post-program growth. Third, the mere implementation of fiscal (and other) SCs does not necessarily deliver growth benefits in the medium term; the quality of SCs—particularly their depth and growth orientation—matters significantly.³⁵

68. The above findings corroborate the view that fiscal adjustment and the quality of reforms implemented under IMF-supported programs are important for growth in the short- and medium term. As 60 percent of all SCs are fiscal in nature, raising the share of fiscal SCs with high depth and greater growth orientation, with careful attention accorded to the implementation capacity and initial conditions prevailing in the country, would enhance the growth benefits of IMF-supported programs.

VII. ASSESSMENT AND LESSONS

69. It is clear from the literature and the IMF's own experience that the relationship between fiscal policies and growth is complex and nonlinear. In the short term, the impact of fiscal adjustment on output hinges on a host of considerations, including the cyclical position of the economy and its structural characteristics, the scope for offsetting monetary policy, the preexisting level of public debt and concerns about debt sustainability, and the composition of fiscal measures and their credibility in the eyes of private actors. While fiscal consolidation improves fiscal balances, it can worsen income distribution, particularly if it relies heavily on reductions in social assistance and social spending and less on progressive tax increases. Invariably, fiscal adjustment influences the structure of revenues and expenditures over time, with implications for the economy's long-term growth. Certain taxes are less conducive to growth, while a shift in favor of outlays on human capital accumulation and public investment is growth enhancing. At the same time, widespread corruption can undermine the key drivers of inclusive growth and erode resources needed to fund programs to promote growth and equity.

70. Multiplier assumptions used in initial program design and program updates were generally broadly in line with the empirical literature, but they are not necessarily fine-tuned to country circumstances as analysis of the growth implications of fiscal adjustment in the program

³⁵ Kim and others (2021) report the post-program potential growth regression results where no distinction is made between fiscal and other SCs. Although not reported, the same conclusion holds when fiscal SCs are used to represent structural reforms in growth regressions. Specifically, fiscal SCs are estimated to have affected post-program potential growth positively and significantly, particularly if fiscal SCs are of high depth—a mere implementation of low-depth fiscal SCs could have no or even negative impact on post-program potential growth.

context is typically quite limited. While there is no official IMF-wide guidance, fiscal multipliers are not discussed widely in IMF program documents. This is confirmed by evidence presented in the case studies. Despite increased awareness among IMF staff of their relevance in program design, fiscal multipliers are rarely reported in program documents. Insufficient attention to fiscal multipliers implies that staff risks underestimating the growth impact of fiscal adjustment.

71. Fiscal conditionality dominates IMF-supported programs, with nearly two-thirds of all conditions classified as fiscal. A high proportion of structural fiscal conditions are implemented in both GRA- and PRGT-supported programs, but only a small fraction of conditions require a permanent institutional change. Nearly four-fifths of fiscal conditions are classified as intended to support fiscal adjustment, with only a small fraction tagged as relevant for growth promotion even in PRGT-supported programs. Meeting fiscal transparency conditionality in PRGT countries has been particularly problematic.

72. Many fiscal SCs are drawn from the growing CD activity of the IMF in this area, reflecting the desire of the institution to more closely integrate CD with surveillance and lending as well as that of countries to use revenue and expenditure conditionality to monitor the implementation of their fiscal reforms. This work is generally appreciated by country authorities, but it is not clear from the data that CD support or, more specifically, fiscal TA leads to improved overall record of implementation. One factor may be that the department responsible for fiscal capacity building (i.e., Fiscal Affairs Department) did not assess the program implementation of SCs in revenue mobilization and public financial management—the two core areas it advises during its repeated visits to program countries—during the period covered by this evaluation. It is encouraging that the change in work practices with a virtual environment required by the COVID-19 pandemic has enabled FAD experts to participate in meetings and provide input on whether SCs derived from fiscal CD have been met. It would be desirable to ensure that this closer involvement by FAD experts continues in the post-pandemic period.

73. Turning to fiscal outcomes, the evidence shows that there were improvements in tax mobilization in PRGT countries after programs ended, which allowed higher government spending, particularly on capital projects. The increase in tax collections was larger in countries that stayed on course and completed their programs. Such countries not only raised higher revenues from taxes on goods and services but also collected more from taxes on income, thereby making the tax systems in these countries more progressive. A similar trend was found in fragile states.

74. GRA countries relied more on expenditure control to achieve fiscal adjustment and create room for the private sector. On average, GRA programs maintained the tax-to-GDP ratio while making good progress towards a growth-promoting tax structure in the post-program period. The dependence on harmful trade taxes fell while that on taxes on goods and services increased. However, outlays on capital projects declined.

75. Trends in social spending (education and health spending) differed across PRGT- or GRA-supported programs. There were indications of increased prioritization of health spending in GRA countries but not in PRGT countries, while education spending as a share of GDP fell in PRGT countries. This suggests that program conditions to protect or raise social spending in IMF-supported programs in the short term were not effective in achieving sustained increases in such spending. Outcomes were even worse in programs that went off track. The poor quality of spending on social sectors and public investment particularly in PRGT countries is a major impediment to strengthening economy's productive capacity as well as achieving society's inclusive growth goals.³⁶ Enhanced emphasis on public financial management conditionality and budget transparency would contribute to improving spending quality and increasing its impact on economic growth. In this respect, a greater reliance on high-depth conditionality targeted at strengthening public financial management systems could contribute to both raising social spending over time and improving its quality.

76. Fiscal adjustment and associated reforms implemented during the program period seem to have had a lasting impact on post-program growth. Fiscal outcomes during programs were more growth friendly in programs where fiscal SCs were of higher depth and growth orientation. While increased revenue collection may have a contractionary effect in the short run, it has a positive influence on medium-term growth and durability of fiscal adjustment. In addition, protection of spending on public investment and social sectors during the program yields significant growth benefits in the medium-term in some cases. These results underscore the benefits of growth-friendly fiscal adjustment in supporting growth and sustaining fiscal stability gains beyond the program horizon.

77. The following key lessons can be drawn from analysis presented in the paper:

- More attention should be paid to analyzing the growth consequences of fiscal adjustment in designing IMF-supported programs. IMF staff should explicitly discuss its analysis of short-term fiscal multipliers in staff reports, recognizing that data limitations and the complexity involved in the estimation of fiscal multipliers in the program context may require acknowledging a range of uncertainty around the multiplier relationship. This approach would enable a better understanding of staff's underlying assumptions and assessment regarding the short-term growth consequences of fiscal adjustment and could help reduce growth optimism bias.
- IMF programs should aim at a higher proportion of high-depth SCs from their current low share and cut back on the proliferation of low-depth ones to focus authorities' attention on measures crucial for improving fiscal performance supportive of growth (such as enhancing the efficiency and compliance of the VAT, increasing the effectiveness of capital spending and improving public financial management systems). The extent to

³⁶ The case studies for Benin, Cameroon, Malawi, and Senegal highlight inefficient spending during the program periods.

which this is feasible would depend on the country's implementation capacity; in this regard, the proportion of high-depth SCs could be larger in GRA countries.

- Greater attention should be paid to ensuring that CD support facilitates improved implementation of the program. This will support *greater depth* in fiscal conditionality in LICs. CD missions on revenue mobilization and public financial management should assess whether critical conditions in these areas in IMF-supported programs are achieving program goals.
- PRGT-supported programs should take a longer-term perspective on seeking to raise public spending on education and health by focusing more on strengthening public financial practices instead of merely protecting or raising such spending through short-term conditionality. Together with greater emphasis on budget transparency, it would help improve social outcomes and economic growth. In this respect, it is encouraging that the IMF has been placing growing emphasis on inclusive growth and stepping up its efforts to strengthen conditionality on social spending.
- Increased attention to strengthening governance of fiscal administration will reinforce the growth enhancing aspects of fiscal policies. The IMF has started to mount governance missions to member countries since the adoption of a new framework in 2018. The recommendations of those missions on fiscal transparency and public financial management should be incorporated in IMF-supported programs.³⁷

³⁷ This was the case for Honduras' 2019 program with the IMF.

APPENDIX TABLES

**Table A1. Tax and Expenditure Trends Associated with IMF-Supported Programs—
Normal Completion
(In percent of GDP)**

	PRGT Programs			GRA Programs		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Taxes	15.0	16.0	17.9	21.9	22.3	22.0
o/w						
On income, profits, and capital gains	5.9	6.7	6.5	10.3	11.5	9.8
On goods and services	3.9	5.1	4.9	8.6	8.0	9.3
On international trade and transactions	2.7	2.7	3.1	2.8	2.5	2.5
Social contributions	2.9	3.3	2.7	6.4	5.8	6.5
General government total expenditure	24.3	26.3	28.3	35.6	33.6	32.4
General government expense	16.6	16.9	17.0	32.8	30.2	29.3
o/w						
Compensation of employees	6.5	6.4	6.7	9.2	8.4	8.8
Purchases/use of goods and services	4.4	4.4	4.1	5.5	5.3	5.1
Interest	1.1	1.1	1.2	3.1	3.2	2.7
Social benefits	3.5	4.2	3.1	9.3	8.3	9.5
Capital expenditure	6.9	8.0	10.2	4.4	4.1	3.5
Net acquisition of financial assets	-0.4	0.3	-1.2	2.1	0.5	-1.8

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

**Table A2. Tax and Expenditure Trends Associated with IMF-Supported Programs—
Off-Track Programs
(In percent of GDP)**

	PRGT Programs			GRA Programs		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Taxes	11.4	13.1	11.4	17.1	19.0	18.5
o/w						
On income, profits, and capital gains	5.1	5.5	4.8	9.1	11.4	9.6
On goods and services	3.4	4.6	3.8	6.0	5.9	7.0
On international trade and transactions	2.8	2.5	2.4	1.9	1.4	1.6
Social contributions	2.4	2.5	1.7	10.2	10.4	8.0
General government total expenditure	26.2	26.6	24.0	35.8	37.7	33.7
General government expense	18.6	18.0	17.4	31.3	34.0	31.0
o/w						
Compensation of employees	7.2	7.1	7.8	10.1	10.2	9.8
Purchases/use of goods and services	4.1	4.1	3.4	5.9	5.5	4.6
Interest	1.3	1.4	2.0	2.9	2.6	2.9
Social benefits	4.2	4.1	3.0	10.6	13.7	10.1
Capital expenditure	7.8	8.7	6.5	5.9	4.5	3.9
Net acquisition of financial assets	0.5	1.1	1.0	-3.1	0.9	-1.1

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

**Table A3. Tax and Expenditure Trends Associated with IMF-Supported Programs—
Fragile States
(In percent of GDP)**

	PRGT Programs			GRA Programs		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Taxes	12.6	14.2	13.8	14.5	18.8	13.8
o/w						
On income, profits, and capital gains	4.6	5.1	5.1	6.3	10.3	5.3
On goods and services	3.4	4.3	3.6	4.0	4.7	4.2
On international trade and transactions	3.1	3.5	2.9	3.6	2.8	3.9
Social contributions	0.8	1.1	1.3	2.6	2.0	0.7
General government total expenditure	25.5	26.8	26.0	36.1	32.3	33.5
General government expense	17.0	16.0	16.5	28.0	25.3	26.7
o/w						
Compensation of employees	6.8	6.8	7.1	10.0	9.4	10.4
Purchases/use of goods and services	4.0	4.0	3.7	6.4	5.6	4.5
Interest	1.2	1.1	1.5	3.2	2.5	2.2
Social benefits	3.3	2.9	2.8	3.3	3.6	2.2
Capital expenditure	8.0	8.8	8.5	8.1	7.0	6.8
Net acquisition of financial assets	0.3	0.4	1.0	-3.6	-0.3	-2.6

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

**Table A4. Tax and Expenditure Trends Associated with
IMF-Supported Programs—Crisis Programs
(In percent of GDP)**

	GRA Programs		
	Pre-program	Program	Post-program
Taxes	22.6	22.2	22.2
o/w			
On income, profits, and capital gains	11.4	11.3	10.3
On goods and services	9.6	9.4	10.5
On international trade and transactions	1.7	1.3	1.4
Social contributions	8.1	8.5	6.7
General government total expenditure	35.5	36.8	33.3
General government expense	33.3	34.8	31.9
o/w			
Compensation of employees	9.3	9.3	8.8
Purchases/use of goods and services	5.9	5.6	5.1
Interest	1.9	2.4	2.7
Social benefits	12.1	13.3	10.5
Capital expenditure	4.4	3.9	3.3
Net acquisition of financial assets	3.6	1.5	-1.8

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

**Table A5. Trends in Government Expenditure by Function—
Normal Completion**

<i>GRA Programs</i>						
Expenditure	In percent of GDP			In percent of Government Expenditure		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Health	3.7	3.6	3.7	10.8	10.6	11.9
Education	4.6	4.3	4.8	13.0	12.6	14.3
Military	2.3	1.9	1.5	8.4	6.8	7.4

<i>PRGT Programs</i>						
Expenditure	In Percent of GDP			In percent of Government Expenditure		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Health	2.0	1.9	2.2	7.3	6.8	6.4
Education	5.0	4.5	4.3	18.8	17.5	16.4
Military	1.4	1.4	1.4	5.9	6.0	5.0

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

**Table A6. Trends in Government Expenditure by Function—
Off-Track Programs**

<i>GRA Programs</i>						
Expenditure	In percent of GDP			In percent of Government Expenditure		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Health	3.1	3.9	3.4	9.0	10.5	10.5
Education	4.8	5.1	4.2	16.2	14.5	13.0
Military	1.9	2.2	1.9	5.7	6.1	6.0

<i>PRGT Programs</i>						
Expenditure	In percent of GDP			In percent of Government Expenditure		
	Pre-program	Program	Post-program	Pre-program	Program	Post-program
Health	1.8	1.6	1.6	6.7	5.9	6.2
Education	4.3	4.4	4.1	15.5	14.7	16.3
Military	2.2	1.8	1.7	9.6	7.3	7.0

Sources: WEO database; author's calculations.

Note: All figures are period average. "Pre-program" captures the three years prior to a program's starting year; "Program" captures program years; "Post-program" captures the three years following a program's ending year.

REFERENCES

- Abbas, S.M. Ali, and Alexander Klemm, 2012, "A Partial Race to the Bottom: Corporate Tax Developments in Emerging and Developing Economies," IMF Working Paper No. 12/28 (Washington: International Monetary Fund).
- Acosta-Ormaechea, Santiago, Sergio Sola, and Jiae Yoo, 2018, "Tax Composition and Growth: A Broad Cross-Country Perspective," *German Economic Review* 20 (4): e70–106.
- Adam, Christopher S., and David L. Bevan, 2013, "Fiscal Deficits and Growth in Developing Countries," *Journal of Public Economics* 89 (4): 571–97.
- Aghion, Philippe, Peter Howitt, and Fabrice Murtin, 2010, "The Relationship between Health and Growth: When Lucas Meets Nelson-Phelps," NBER Working Paper No. 15813 (Cambridge, MA: National Bureau of Economic Research).
- Alesina, Alberto, and Silvia Ardagna, 2013, "The Design of Fiscal Adjustments," *Tax Policy and the Economy* 27:19–68.
- Alesina, Alberto, Carlo Favero, and Francesco Giavazzi, 2015, "The Output Effect of Fiscal Consolidation Plans," *Journal of International Economics* 96 (Supp. 1): S19–42.
- Ali, Hamid E., and Sakiru A. Solarin, 2019, "Military Spending, Corruption and the Welfare Consequences," *Defence and Peace Economics*.
<https://doi.org/10.1080/10242694.2019.1567181>.
- Arizala, Francisco, and others, 2020, "The Impact of Fiscal Consolidations on Growth in Sub-Saharan Africa," *Empirical Economics* (June).
- Arnold, Jens Matthias, and others, 2011, "Tax Policy for Economic Recovery and Growth," *Economic Journal* 121 (550): F59–80.
- Atoyan, R., and P. Conway, 2006, "Evaluating the Impact of IMF Programs: A Comparison of Matching and Instrumental-Variable Estimators," *Review of International Organizations* 1 (2): 99–124.
- Baer, Katherine, and others, 2021, "Building Fiscal Institutions in Fragile States—A Two-Step Approach," In *Macroeconomic Policy in Fragile States*, edited by R. Chami, R. Espinoza, and P. Montiel (Oxford University Press, UK).
- Baldacci, Emanuele, and others, 2004, "The Persistence of Fiscal Adjustments in Developing Countries," *Applied Economic Letters* 11 (4): 209–12.
- _____, 2006, "The Phasing of Fiscal Adjustments: What Works in Emerging Market Economies?" *Review of Development Economics* 10 (4): 612–31.

- _____, 2008, "Social Spending, Human Capital, and Growth in Developing Countries," *World Development* 36 (8): 1317–41.
- Baldacci, Emanuele, Sanjeev Gupta, and Carlos Mulas-Granados, 2015, "Debt Reduction, Fiscal Adjustment, and Growth in Credit-Constrained Economies," *Journal of Applied Economics* 18 (1): 71–97.
- Barro, Robert, 1974, "Are Government Bonds Net Wealth?" *Journal of Political Economy* 82:1095–1118.
- Bassanini, Andrea, and Romain Duval, 2006, "Employment Patterns in OECD Countries: Reassessing the Role of Policies and Institutions." OECD Economics Department Working Paper No. 486 (Organisation for Economic Co-operation and Development, Paris).
- Bastagli, F., D. Coady, and Sanjeev Gupta, 2012, "Income Inequality and Fiscal Policy," IMF Staff Discussion Note SDN/12/08 (Washington: International Monetary Fund).
- Batini, Nicoletta, and others, 2014, "Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections," IMF Technical Notes and Manuals No. 2014/04 (Washington: International Monetary Fund).
- Bayoumi, Tamim, and Silvia Sgherri, 2006, "Mr. Ricardo's Great Adventure: Estimating Fiscal Multipliers in a Truly Intertemporal Model," IMF Working Paper No. WP/06/168 (Washington: International Monetary Fund).
- Blanchard, Olivier, and Carlo Cottarelli, 2010, "How to Bake a (Cr)edible Medium-Term Fiscal Pie," IMF Blog, November 4, <https://blogs.imf.org/2010/11/04/how-to-bake-a-credible-medium-term-fiscal-pie/>.
- Blanchard, Olivier J., and Daniel Leigh, 2013, "Growth Forecast Errors and Fiscal Multipliers," *American Economic Review* 103 (3): 117–20.
- Bom, Pedro R.D., and Jenny E. Ligthart, 2009, "How Productive Is Public Capital? A Meta-Regression Analysis," International Studies Program Working Paper No. 09-12 (Andrew Young School of Policy Studies, Georgia State University, Atlanta).
- Campbell, John, and Gregory Mankiw, 1990, "Permanent Income, Current Income, and Consumption," *Journal of Business and Economic Statistics* 8:265–80.
- Chari, Anusha, and Peter Blair Henry, 2015, "Two Tales of Adjustment: East Asian Lessons for European Growth," *IMF Economic Review* 63 (1): 164–96.
- Chudik, Alexander, and others, 2017, "Is There a Debt-Threshold Effect on Output Growth?," *Review of Economics and Statistics* 99 (1): 135–50.

- Clements, B., S. Gupta, and M. Nozaki, 2013, "What Happens to Social Spending in IMF-Supported Programs?," *Applied Economics* 45 (28): 4022–33.
- Clements, Benedict, and others, eds., 2015, *Inequality and Fiscal Policy* (Washington: International Monetary Fund).
- Coenen, Günter, and others, 2012, "Effects of Fiscal Stimulus in Structural Models," *American Economic Journal: Macroeconomics* 4 (1): 22–68.
- Crivelli, Ernesto, and Sanjeev Gupta, 2014, "Does Conditionality in IMF-Supported Programs Promote Revenue Reform?" IMF Working Paper No. WP/14/206 (Washington: International Monetary Fund).
- _____, 2016, "Does Conditionality in IMF-Supported Programs Promote Revenue Reform?" *International Tax and Public Finance* 23:550–79.
- _____, 2018, "IMF Conditionality Supports Revenue Collection: Is It Just Tax Rates?" *Applied Economics Letters* 24 (12): 882–85.
- DeLong, J. Bradford, and Lawrence H. Summers, 2012, "Fiscal Policy in a Depressed Economy [with Comments and Discussion]," *Brookings Papers on Economic Activity* (Spring):233–97.
- Dreher, A, 2006, "IMF and Economic Growth: The Effects of Programs, Loans, and Compliance with Conditionality," *World Development* 34 (5): 769–88.
- Dutu, R., and P. Sicari, 2016, "Public Spending Efficiency in the OECD: Benchmarking Health Care, Education and General Administration," OECD Economics Department Working Paper No. 1278 (Organisation for Economic Co-operation and Development, Paris).
- Economist*, 2020, "A New Era of Economics, Starting Over Again," July 25.
- Fabrizio, Stefania, and Valentina Flamini, 2015, "Fiscal Consolidation and Income Inequality," In *Inequality and Fiscal Policy*, edited by B. Clements and others (Washington: International Monetary Fund).
- Fatás, Antonio, and Ilian Mihov, 2013, "Policy Volatility, Institutions, and Economic Growth," *Review of Economics and Statistics* 95 (2): 362–76.
- Fischer, Stanley, 1993, "The Role of Macroeconomic Factors in Growth," *Journal of Monetary Economics* 32 (3): 485–512.
- Furceri, Davide, João Tovar Jalles, and Prakash Loungani, 2015, "Fiscal Consolidation and Inequality in Advanced Economies: How Robust Is the Link?," in *Inequality and Fiscal Policy*, edited by B. Clements and others (Washington: International Monetary Fund).

- Gaspar, Vitor, Sanjeev Gupta, and Carlos Mulas-Granados, 2017, *Fiscal Politics* (Washington: International Monetary Fund).
- Gemmell, N., R. Kneller, and I. Sanz, 2016, "Does the Composition of Government Expenditure Matter for Long-Run GDP Levels?" *Oxford Bulletin of Economics and Statistics* 78 (4): 522–47.
- Giavazzi, Francesco, and Marco Pagano, 1990, "Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries," *NBER Macroeconomics Annual* 5:75–111.
- Grigoli, Francesco, and Javier Kaspoli, 2018, "Waste Not, Want Not: The Efficiency of Health Expenditures in Emerging and Developing Economies," *Review of Development Economics* 22:384–403.
- Gupta, Sanjeev, 2018, "Time to Pay More Attention to Tax Expenditures?," CGD Policy Blogs, August 1. <https://www.cgdev.org/blog/time-pay-more-attention-tax-expenditures>.
- Gupta, Sanjeev, Hamid R. Davoodi, and Erwin R. Tiongson, 2002, "Corruption and the Provision of Health Care and Education Services," In *Governance, Corruption, & Economic Performance*, edited by G.T. Abed and S. Gupta (Washington: International Monetary Fund).
- Gupta, Sanjeev, and Joao T. Jalles, 2020 "On the Political Economy Determinants of Tax Reforms: Evidence from Developing Countries," CGD Policy Paper, No.199, December.
- Gupta, Sanjeev, Luiz de Mello, and Raju Sharan, 2001, "Corruption and Military Spending," *European Journal of Political Economy* 17 (4): 749–77.
- Gupta, Sanjeev, Michela Schena, and Seyed Reza Yousefi, 2020, "Revisiting Expenditure Conditionality in IMF-Supported Programs," *Applied Economics* 52: 6338-6359.
- Gupta, Sanjeev, and others, 2000, "Social Issues in IMF-Supported Programs," IMF Occasional Paper No. 191 (Washington: International Monetary Fund).
- _____, 2005a, "Fiscal Policy, Expenditure Composition, and Growth in Low-Income Countries," *Journal of International Money and Finance* 24 (3): 441–63.
- _____, 2005b, "What Sustains Fiscal Consolidations in Emerging Market Countries?" *International Journal of Finance & Economics* 10 (4): 307–21.
- Hanushek, Eric A., and Ludger Woessmann, 2012, "Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation," *Journal of Economic Growth* 17:267–321.

- Herrera, Santiago, and Gaobo Pang, 2005., "Efficiency of Public Spending in Developing Countries: An Efficiency Frontier Approach," Policy Research Working Paper No. 3645 (Washington: World Bank).
- Herwartz, Helmut, and Bernd Theilen, 2020, *Public Choice*. <https://doi.org/10.1007/s11127-020-00785-7>.
- Ilzetzki, Ethan, Enrique G. Mendoza, and Carlos A. Végh, 2013, "How Big (Small?) are Fiscal Multipliers?" *Journal of Monetary Economics* 60 (2): 239–54.
- International Monetary Fund, 2014, "Spillovers in International Corporate Taxation," IMF Policy Paper, May (Washington).
- _____, 2015a, "Fiscal Policy and Long-Term Growth," IMF Policy Paper, April (Washington).
- _____, 2015b, "Making Public Investment More Efficient," IMF Policy Paper, May (Washington).
- _____, 2015c, "Crisis Program Review," IMF Policy Paper, November (Washington).
- _____, 2016, "Corruption: Costs and Mitigating Strategies," IMF Staff Discussion Note No. 16/05 (Washington).
- _____, 2017, "Regional Economic Outlook: Sub-Saharan Africa," (Washington).
- _____, 2018a, "Capacity Development Review," Overview Paper, November (Washington).
- _____, 2018b, IMF Country Report on Cameroon, No. 18/256 (Washington).
- _____, 2018c, "Public Investment Management Assessment: Review and Update," IMF Policy Paper, May (Washington).
- _____, 2018d, "Review of 1997 Guidance Note on Governance—A Proposed Framework for Enhanced Fund Engagement," IMF Policy Paper, May (Washington).
- _____, 2019a, "Curbing Corruption," Fiscal Monitor, April (Washington).
- _____, 2019b, "Output Effects of Fiscal Adjustment for the Republic of Congo," Memo (Washington).
- _____, 2019c, "Republic of Congo," IMF Country Report 19/244 (Washington).
- _____, 2019d, "2018 Review of Program Design and Conditionality," IMF Policy Paper No. 19/012 (Washington).

- _____, 2019e, "Strategy for IMF Engagement on Social Spending." IMF Policy Paper No. 19/016 (Washington).
- _____, 2020, "How to Operationalize IMF Engagement on Social Spending during and in the Aftermath of the COVID-19 Crisis," IMF How To Notes No. 20/02 (Washington).
- Jamison, Dean T., and others, 2013, "Global Health 2035: A World Converging within a Generation," *Lancet* 382 (9908): P1898–1955.
- Johansson, Åsa, 2016, "Public Finance, Economic Growth and Inequality: A Survey of the Evidence," OECD Economics Department Working Paper No. 1346 (Organisation for Economic Co-operation and Development, Paris).
- Kataryniuk, Iván, and Javier Vallés, 2017, "Fiscal Consolidation after the Great Recession: The Rome of Composition," *Oxford Economic Papers* 70 (2): 563–85.
- Kentikelenis, A.E., T.H. Stubbs, and L.P. King, 2016, "IMF Conditionality and Development Policy Space, 1985–2014," *Review of International Political Economy* 23 (4): 543–82.
- Kim, Jun, and others, 2021, "Cross-Country Analysis of Program Design and Growth Outcomes: 2008–19," IEO Background Paper BP/21-01/01 (Washington: International Monetary Fund).
- Kim, Jung Y., and Kwang Y. Lee, 2021, "Structural Conditions, Structural Reforms and Growth in IMF-Supported Programs," IEO Background Paper BP/21-01/04 (Washington: International Monetary Fund).
- Kneller, Richard, Michael F. Bleaney, and Norman Gemmell, 1999, "Fiscal Policy and Growth: Evidence from OECD Countries," *Journal of Public Economics* 74 (2): 171–90.
- Lee, Young, and Roger H. Gordon, 2005, "Tax Structure and Economic Growth," *Journal of Public Economics* 89 (5–6): 1027–43.
- MacDonald, R, 2007, "Experts Call for Reform of the International Monetary Fund," *Lancet* 370:1749–50.
- McNabb, Kyle, 2018, "Tax Structures and Economic Growth: New Evidence from the Government Revenue Dataset," *Journal of International Development* 30 (2): 173–205.
- Newiak, M., and T. Willems, 2017, "Evaluating the Impact of Non-financial IMF Programs Using the Synthetic Control Method," IMF Working Paper No. 17/109 (Washington: International Monetary Fund).

- Ooms, G., and R. Hammonds, 2009, "Scaling Up Global Social Health Protection: Prerequisite Reforms to the International Monetary Fund," *International Journal of Health Services* 39 (4): 795–801.
- Pescatori, Andrea, Damiano Sandri, and John Simon, 2014, "Debt and Growth: Is There a Magic Threshold?" IMF Working Paper No. 14/34 (Washington: International Monetary Fund).
- Pinon-Farah, M., J. Chopra, and P. Allum, 2021, "Growth and Adjustment in IMF-supported Programs for Africa," IEO Background Paper, BP/21-01/07 (Washington).
- Przeworski, A., and J.R. Vreeland, 2000, "The Effect of IMF Programs on Economic Growth," *Journal of Development Economics* 62 (2): 385–421.
- Romp, Ward, and Jakob De Haan, 2007, "Public Capital and Economic Growth: A Critical Survey," *Perspektiven der Wirtschaftspolitik* 8 (S1): 6–52.
- Rowden, R, 2009, "Concern over IMF Impact on Health Spending," *IMF Survey Magazine: What Readers Say*.
- Saez, Emmanuel, Joel Slemrod, and Seth Giertz, 2012, "The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review," *Journal of Economic Literature* 50 (1): 3–50.
- Tanzi, Vito, and Hamid R. Davoodi, 2002, "Corruption, Public Investment, and Growth," in *Governance, Corruption, & Economic Performance*, edited by G.T. Abed and S. Gupta (Washington: International Monetary Fund).
- Woo, Jaejoon, and others, 2017, "Distributional Consequences of Fiscal Adjustments: What Do the Data Say?" *IMF Economic Review* 65 (2): 273–307.
- Woo, Jaejoon, and Manmohan S. Kumar, 2015, "Public Debt and Growth," *Economica* 82 (328): 705–39.
- Yang, Weonho, Jan Fidrmuc, and Sugata Ghosh, 2015, "Macroeconomic Effects of Fiscal Adjustment: A Tale of Two Approaches," *Journal of International Money and Finance* 57: 31–60.