5

GROWTH ASPECTS OF MACROECONOMIC PROGRAM DESIGN

The IMF's attention to growth has been increasingly reflected in program objectives (see Figure 1). This chapter provides cross-country evidence on how attention to growth was incorporated in program design and examines country experience in this regard.[22] Given that the primary objective of programs is to correct BOP problems and restore external viability, attention to growth needs to be assessed in conjunction with sustainability considerations.

ATTENTION TO GROWTH AND SUSTAINABILITY IN PROGRAM DESIGN

Growth and sustainability considerations in program design are assessed through the lens of fiscal policy because it is at the center of macroeconomic stabilization in programs and relates to policy instruments under control of country authorities. To be more specific, our assessment focuses on how fiscal policy was calibrated to address growth and debt sustainability concerns and how it reacted to interim macroeconomic developments. This assessment is undertaken both for initial program design and for program adaptation. Initial program design at program approval provides the most comprehensive snapshot of the macroeconomic framework given the financing envelope of the program. However, focusing only on initial program design would miss a crucial aspect of program design—the flexible adaptation of programs in response to interim macroeconomic outcomes in the context of periodic reviews of program implementation (Mussa and Savastano, 1999).

Initial Program Design

For initial program design, the assessment is guided by the analytical framework developed by Bohn (1998, 2008) and used in subsequent research on debt sustainability and fiscal space (e.g., Mendoza and Ostry, 2008). The analytical framework identifies a positive response of the primary balance to lagged debt as a sufficient (but weak) condition for debt sustainability. Allowing for a nonlinear fiscal reaction function incorporates the notion of fiscal fatigue (Ostry and others, 2010).

This analytical framework is used to estimate a fiscal reaction function which relates programmed fiscal policy to the lagged debt ratio and the output gap.[23] The estimated reaction coefficients provide evidence to assess how growth and sustainability considerations were reflected in the design of fiscal policy.[24] Growth considerations would suggest on average a positive response of the primary balance to the output gap so that programmed fiscal policy would be counter-cyclical in nature.

[22] This chapter draws on Kim and others (2021) and country case studies prepared for the evaluation.

[23] In the empirical analysis, the output gap is constructed as a percentage deviation of (projected) real GDP from the log-linear trend in real GDP over the 10-year period prior to program approval.

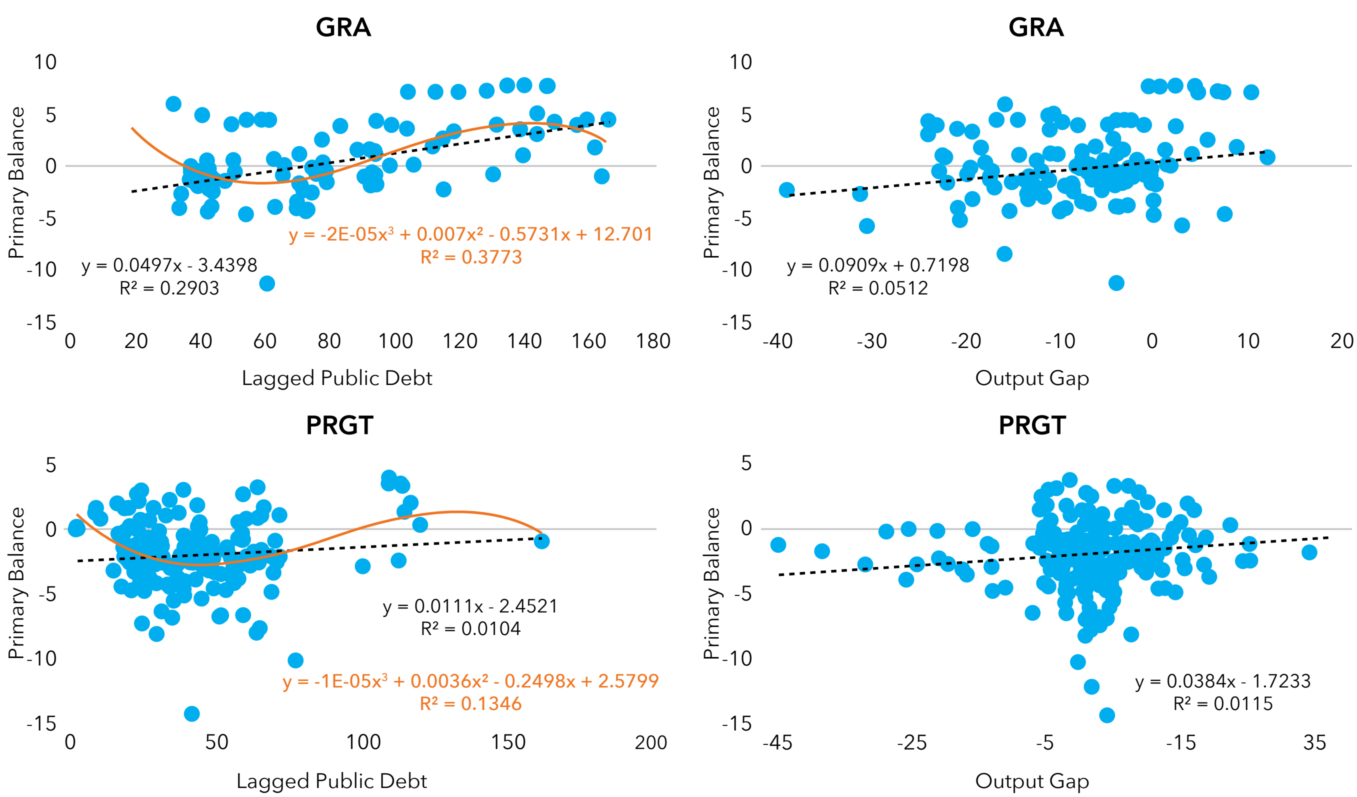
[24] See Kim and others (2021) for the estimation results and related discussions.

Scatter plots based on data for initial projections in the programs covered in the evaluation seem to support the hypothesis that fiscal policy has been set to reflect both stabilization and growth objectives by responding to lagged public debt and the output gap, more so in GRA programs than in PRGT programs (Figure 17). The nonlinear trend lines in the scatter plots (left panels) suggest a positive response of the primary balance to lagged debt over the interval of debt ratio between 50 percent and 140 percent of GDP, after which positive fiscal reaction is weakened. This feature in fiscal outcomes is attributed to fiscal fatigue in Ghosh and others (2013). In the context of program design, it could reflect some feasibility constraints in fiscal adjustment or growth considerations beyond what is captured by the reaction to the output gap.

Formal multivariate regression results broadly confirm the bivariate relationships in the data. The estimated linear reaction coefficients are of the expected sign in most cases but statistically significant only in GRA programs, suggesting that both growth and sustainability considerations were well reflected in programmed fiscal policy in GRA programs but less clearly so in PRGT programs (Figure 18). The results for nonlinear fiscal reactions (not reported here) provide stronger support for growth and sustainability consideration embedded in initial program design in both GRA and PRGT programs, although the results continue to be weaker in the latter, as the fiscal reaction to the output gap continues to be small and not significant in PRGT programs.[25]

FIGURE 17. FISCAL REACTIONS IN INITIAL PROGRAM DESIGN

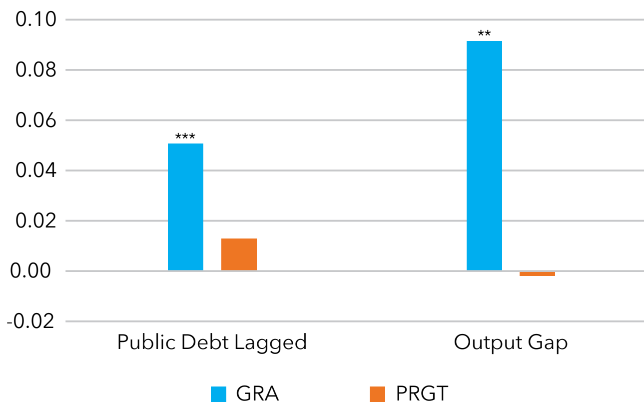
(In percent of GDP)



Source: Kim and others (2021).

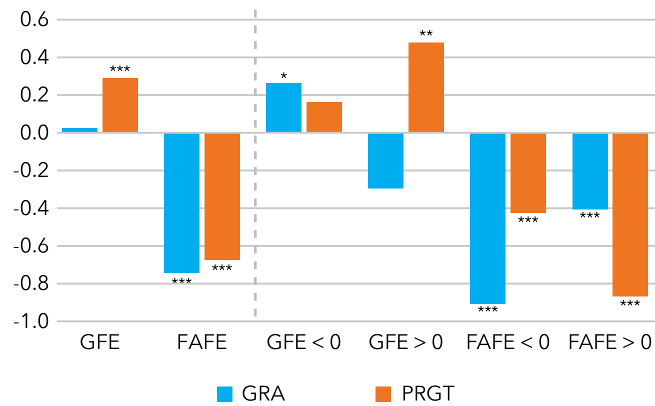
[25] See Kim and others (2021) for a fuller discussion on nonlinear fiscal reactions and their implications.

FIGURE 18. LINEAR FISCAL REACTION COEFFICIENTS: INITIAL PROGRAM DESIGN



Source: Kim and others (2021).
Note: Asterisks denote statistical significance. *p<0.1, ** p<0.05, *** p<0.01.

FIGURE 19. FISCAL REACTION COEFFICIENTS: PROGRAM ADAPTATION



Source: Kim and others (2021).
Note: Asterisks denote statistical significance. * p<0.1, ** p<0.05, *** p<0.01.

Program Adaptation

Drawing on the analytical framework used by IEO (2014), the evaluation examined how growth and sustainability considerations were reflected in modifications to the policy framework in program reviews. In particular, we examined how updated (one-period-ahead) projections for fiscal adjustment in the next period were modified from previous (two-period-ahead) projections in response to interim growth and fiscal adjustment forecast errors (defined as actual minus projection) observed in the current period. Growth considerations generally call for positive fiscal reaction to growth forecast errors (GFEs), so that growth shortfalls in the current year lead to less ambitious fiscal adjustment and ceteris paribus higher growth than initially programmed in the next year. Sustainability considerations would require negative reaction to fiscal adjustment forecast errors (FAFEs) so that adjustment shortfalls in the current year lead to stronger fiscal adjustment than initially programmed in the next year.

Regression results again show that both growth and sustainability considerations were at play in calibrating fiscal reactions in program adaptation. In the estimation, the dependent variable is the modification in fiscal projection, measured as the difference between one- and two-year-ahead fiscal projections.[26] The estimated fiscal reaction coefficients are of the expected sign and statistically significant in most cases (Figure 19, bars on the left side). The reaction coefficients of FAFEs are more negative for GRA programs than for PRGT programs, suggesting that sustainability considerations have generally been stronger in GRA programs than in PRGT programs. By contrast, growth considerations seem to have played a relatively stronger role in adapting PRGT programs than in GRA programs when assessed by the reaction coefficients of GFEs.

The disaggregated results between positive and negative forecast errors provide a more detailed account of how growth and sustainability considerations were addressed in program adaptation (Figure 19, bars on the right side). For instance, about 90 percent of adjustment shortfalls (FAFE < 0) were programmed to be recovered in the next period in GRA programs but less than half in PRGT programs. While fiscal reaction to growth shortfalls (GFE < 0) was stronger in GRA programs than in PRGT programs, reaction to upside adjustment surprises (FAFE > 0) gave more weight to growth considerations in PRGT programs than in GRA programs. Specifically, about 87 percent of upside adjustment surprises (FAFE > 0) were to be reversed in the next period in PRGT programs while only about 40 percent were to be reversed in GRA programs.

[26] To approximate the information available to country authorities and Fund staff at the time of projection, actual data used to construct growth and fiscal adjustment forecast errors are real time data as recorded in the WEO vintages matched with program years, rather than the latest data from the most recent WEO vintage. See Kim and others (2021) for further technical details.

LESSONS FROM COUNTRY EXPERIENCE

The country case studies in this evaluation broadly support the cross-country empirical evidence of efforts to reflect both growth and sustainability considerations in program design and adaptation. In virtually all cases, staff and country officials discussed the appropriate degree of upfront adjustment in the specific country circumstances, typically seeking to moderate the pace of fiscal adjustment to avoid too adverse an impact on activity while still providing a credible path to achieving stabilization goals. In some cases, particularly earlier in the evaluation period (e.g., Grenada 2010, Jamaica 2010, and Pakistan 2008), authorities felt that staff were too inflexible in insisting on front-loading of fiscal adjustment that was hard to sustain. In other cases, officials and staff felt that front-loaded adjustment was essential to restore confidence in the face of wide imbalances, and some officials (e.g., in Honduras 2014, Latvia 2008, and Romania 2009) in fact preferred to follow a tougher adjustment path than proposed by staff feeling this would pave the way for more vigorous recoveries by supporting recoveries of business sentiment and regaining market access.

It is striking, however, that program documents presented to the IMF Board seldom provided much analysis of the potential short-term trade-offs between adjustment and growth or how it could be affected by different policy mixes. Moreover, program documents discussed the specific actions for authorities to take in response to the materialization of growth-related risks in less than 20 percent of the programs studied, including Egypt, Ghana, Grenada, Jordan, Mongolia, Tunisia, and Ukraine. Even in the few programs with explicit program contingencies, measures considered in the risk assessment matrix were focused largely on policy implementation risk while indicated responses to adverse shocks to growth were often limited to avoiding pro-cyclical fiscal tightening rather than easing the adjustment effort in the face of an adverse growth shock.

The relative paucity of discussion of program contingencies in initial program design notwithstanding, program reviews generally adapted policy settings to respond to adverse growth outcomes where applicable in most case studies, consistent with the broader empirical evidence. Specifically, program reviews adapted fiscal targets due to weaker growth outcomes or fiscal overruns in many programs, including Bangladesh, Cameroon, Grenada, Latvia (where Fund staff sought less fiscal consolidation than the authorities), Mongolia, Pakistan (not in the first review but in subsequent reviews), Romania, Senegal, and Ukraine. Program reviews were also combined and/or extended to provide the authorities more time to take corrective policy actions after policy slippages in a range of programs, including Bangladesh, Ghana, Honduras, Jordan, Malawi, Mongolia, Pakistan, Tunisia, and Ukraine.

Most authorities and staff viewed flexibility in program adaptation as contributing to program success. In Tunisia, staff viewed adaptations to the program during quarterly reviews as the key instrument for adjusting the program framework and taking remedial actions. In Honduras, authorities felt that the Fund's more flexible attitude during the 2014 program contributed to its success, while the lack of flexibility during the 2010 program contributed to its going off track irretrievably. In some other programs, authorities were less supportive of the way program adaptation was handled. In Ghana, authorities thought the Fund should have been more flexible in completing reviews. In Ukraine, staff and authorities, with the benefit of hindsight, agreed that greater emphasis should have been placed on contingency planning.

However, the case studies also illustrate a clear risk related to more extended adjustment paths and program adaptation in response to weaker than expected growth outcomes, particularly when the envisaged stabilization of public debt is not achieved. Cameroon and Senegal provide examples of countries in which fiscal adjustment (over a sequence of programs in case of Senegal) fell short as deviations from adjustment targets have been accommodated in the presence of weak growth and external borrowing has been used to support public investment, while the private sector response has remained lackluster. As a result, these countries have faced increasing medium-term debt sustainability risks.

ASSESSMENT

When assessed through the lens of fiscal policy, both growth and sustainability considerations were well incorporated in initial program design in GRA programs but less clearly so in PRGT programs. In GRA programs, fiscal primary balance targets reacted positively to the lagged debt ratio (satisfying a weak debt sustainability condition), as well as to the output gap (implying counter-cyclical fiscal policy). In addition, fiscal reaction to the lagged debt ratio appears to be nonlinear, providing some further support for growth considerations embodied in initial program design. In contrast, such systematic fiscal reaction was less clear if not absent in PRGT programs.

In adapting programs for interim outcomes, updated fiscal projections balanced growth and sustainability considerations not only in GRA programs but also in PRGT programs. Fiscal adjustment targets tended to be revised downwards in response to interim growth shortfalls and upwards in response to adjustment shortfalls. Sustainability considerations were generally stronger in GRA programs than in PRGT programs. Country case studies broadly confirm these cross-country findings on program adaptation. Explicit discussions on program contingencies were relatively infrequent among programs studied, but nonetheless program reviews generally eased fiscal targets due to weaker growth outcomes or fiscal overruns in many programs. Program reviews were also combined and/or extended to provide time for corrective policy action and compliance with program conditions. Moreover, most authorities and staff viewed flexibility in program adaptation as contributing to program success.