

WIDER Working Paper 2024/11

Decomposing budget credibility

Felix Mambo¹ and Ricardo Santos²

March 2024

Abstract: Budget reliability is the first pillar of Public Expenditure and Financial Accountability (PEFA). In this study, we construct an expansion of the PEFA government response accuracy indicator and test its decomposition, with an application to the government budgets and state general accounts of Mozambique from 2014 to 2020. A special focus is given to public expenditure in social sectors: education, health, social protection, and public works. We find that the overall indicator of budget reliability hides significant differences in the budget credibility of different sectors, with social sectors contributing more to budget credibility than their weight in overall public expenditure. We find a strong suggestion that the budgeting and execution of public investment and—even more so—of externally financed public investment, is a weakening factor of budget credibility in Mozambique. Further, resources originally budgeted for investment seem to be possibly used to fund current expenditures. Finally, there is no strong evidence that mid-fiscal-year budget adjustments contribute to higher budget reliability. Our results suggest that the decomposition we propose adds valuable information that can support budget oversight and guide in-depth analyses of budget discrepancies.

Key words: public finance management, PEFA, budget credibility, decomposition, social sectors

JEL classification: H61, H5, C65

Acknowledgements: We acknowledge the opportunities offered to present and the invaluable feedback given by Ana Cristina Barros, Alex Warren-Rodrigues, Clara Moslera, Rômulo Correa, Helder Machango, Sam Jones, Santiago Goicochea, Teles Ribeiro, and Vinícius dos Reis. We also want to thank the UNICEF Mozambique Social Policy team for the inspiration and support given to an earlier version of this study. All errors and omissions are our own.

¹ International Growth Centre (IGC), Mozambique country team, felix.mambo@theigc.org; ² UNU-WIDER, Helsinki, ricardo.santos@wider.unu.edu

This study has been prepared within the UNU-WIDER project [Inclusive growth in Mozambique – scaling up research and capacity](#) implemented in collaboration between UNU-WIDER, University of Copenhagen, University Eduardo Mondlane, and the Mozambican Ministry of Economy and Finance. The project is financed through specific programme contributions by the governments of Finland, Norway, and Switzerland.

Copyright © UNU-WIDER 2024

UNU-WIDER employs a fair use policy for reasonable reproduction of UNU-WIDER copyrighted content—such as the reproduction of a table or a figure, and/or text not exceeding 400 words—with due acknowledgement of the original source, without requiring explicit permission from the copyright holder.

Information and requests: publications@wider.unu.edu

ISSN 1798-7237 ISBN 978-92-9267-469-4

<https://doi.org/10.35188/UNU-WIDER/2024/469-4>

Typescript prepared by Siméon Rapin.

United Nations University World Institute for Development Economics Research provides economic analysis and policy advice with the aim of promoting sustainable and equitable development. The Institute began operations in 1985 in Helsinki, Finland, as the first research and training centre of the United Nations University. Today it is a unique blend of think tank, research institute, and UN agency—providing a range of services from policy advice to governments as well as freely available original research.

The Institute is funded through income from an endowment fund with additional contributions to its work programme from Finland and Sweden, as well as earmarked contributions for specific projects from a variety of donors.

Katajanokanlaituri 6 B, 00160 Helsinki, Finland

The views expressed in this paper are those of the author(s), and do not necessarily reflect the views of the Institute or the United Nations University, nor the programme/project donors.

1 Introduction

A reliable budget is one of the most evident signals of fiscal openness and public transparency (de Renzio and Wehner 2017), leading to improved macro-fiscal performance and governance in the short run and contributing towards achieving every country’s development outcomes in the long run. A reliable budget induces effective public investment and service delivery (Robinson et al. 2021; de Renzio et al. 2019), overall and in sectors such as health (Goryakin et al. 2020). A more reliable budget is also a strong signal of government accountability, leads to a perception of lower corruption—especially when linked with accurate and transparent expenditure disclosure (Chen and Neshkova 2020)—and, consequently, enhances economic agents’ trust in the country’s fiscal future (Montes and Acar 2020), leading to higher savings, investment, and economic growth.

Not surprisingly, budget reliability is the first pillar of Public Expenditure and Financial Accountability (PEFA). PEFA Secretariat (2019: 2) states a budget is credible if ‘[t]he government budget is realistic and is implemented as intended. This is measured by comparing actual revenues and expenditures (the immediate results of the PFM [public finance management] system) with the original approved budget.’

In this study, in direct response to what is recommended by Montes and Acar (2020), we add to PEFA Secretariat (2019) by proposing and analysing the decomposition of PEFA’s underlying formulas for its overall public expenditure budget credibility indicator, PI-1, and its overall public revenue credibility indicator, PI-3. More specifically, we decompose PI-1 between sectors, then within the social sectors’ expenditure, i.e., on education, health, social protection, and public works¹, along current² and investment expenditure³. We then propose a second decomposition, applying it to both PI-1 and PI-3 indicators, allowing us to assess whether within-fiscal-year budget adjustments improve or hinder budget credibility.

We analyse Mozambique using publicly disclosed government budget and expenditure reports from the 2014 to 2020 fiscal years. Even before applying the decomposition, we find evidence

¹ Without loss of generality, the same methodology can be applied to all sectors in a state budget, as long as the same typology of costs is reported in the official PFM documents.

² Current expenditure comprises the following expenses: salaries and wages, other staff costs (variable compensations linked to the performance of specific duties or tasks established in the various professional careers of state officials and agents), acquisition of consumer goods and contracted services (including property rental), and other operating expenses.

³ Investment costs include, for example, expenditure on expanding infrastructure to support economic activities or to support basic services, such as education, health, or water and sanitation, but in Mozambique, it also includes externally funded social protection transfers.

of a consistent under-execution of the Government of Mozambique's expenditure budget that does not track an equivalent under-execution of its revenue budget.

By applying the decomposition, we find that the overall indicator of budget reliability hides significant differences in the budget credibility of different sectors and that social sectors show relatively higher budget credibility than other public sectors. It also hides differences in contribution to budget reliability of the execution of current and investment expenses.

The budgeting and execution of public investment, and even more so, of externally financed public investment, appears to be a significant weakening factor of budget credibility. In some cases, there is a suggestion that resources originally budgeted for investment were possibly used to fund current expenditures. This signal can be confirmed through a more in-depth analysis.

Finally, we do not find strong evidence that mid-fiscal-year budget adjustments contribute to higher budget reliability.

Overall, we find that the proposed decomposition adds information which can be used to guide in-depth analyses of budget discrepancies.

Our study speaks to the literature on public finance management, particularly on budget transparency, budgetary management and oversight. It also speaks to predictability in the funding of public service delivery and welfare impacts on citizens by providing usable metrics of budget reliability.

In the following sections, we will introduce the indicators used to measure and decompose budget reliability, followed by the data used and our analysis of Mozambique's budget reliability on overall and social expenditures and government revenues. We will finalize with a discussion and conclusion.

2 Measuring and decomposing budget reliability

To measure and decompose budget credibility, we build on PEFA's guidelines and scoring system (PEFA Secretariat 2019):

- A = 'Aggregate expenditure outturn was between 95% and 105% of the approved aggregate budgeted expenditure in at least two of the last three years.'
- B = 'Aggregate expenditure outturn was between 90% and 110% of the approved aggregate budgeted expenditure in at least two of the last three years.'

- C = ‘Aggregate expenditure outturn was between 85% and 115% of the approved aggregate budgeted expenditure in at least two of the last three years.’
- D = ‘Performance is less than required for a C score.’

Underlying this scoring system, we find an indicator we call *weighted budget discrepancies* (*WBD*):

$$WBD = \frac{E - IB}{IB} \quad (1)$$

In this study, we apply two methods of decomposition: functional/sectoral and procedural.

The functional/sectoral decomposition allows to assess the contribution of each sector $s \in S$, the set of all public sectors, to the overall budget discrepancy in expenditure in year y :

$$WBD_y = \frac{E_y - IB_y}{IB_y} = \sum_{s=0}^S \underbrace{\frac{E_{s,y} - IB_{s,y}}{IB_{s,y}}}_{WBD_{s,y}} * \underbrace{\frac{IB_{s,y}}{IB_y}}_{\text{Share of } s \text{ in } IB} \quad (2)$$

In other words, this decomposition demonstrates that a government’s overall budget reliability in expenditure is a function of the sum of each sector’s budget reliability,

$$WBD_{s,y} = \frac{E_{s,y} - IB_{s,y}}{IB_{s,y}} \quad (3)$$

weighted by its share of total budgeted expenditure,

$$\frac{IB_{s,y}}{IB_y} \quad (4)$$

This decomposition can go one step further, from sector to function, allowing an assessment of the contributions of functioning (f) and investment (i) costs to budget discrepancies in each specific sector:

$$WBD_{s,y} = \underbrace{\frac{E_{f,s,y} - IB_{f,s,y}}{IB_{f,s,y}}}_{WBD_{f,s,y}} * \frac{IB_{f,s,y}}{IB_{s,y}} + \underbrace{\frac{E_{i,s,y} - IB_{i,s,y}}{IB_{i,s,y}}}_{WBD_{i,s,y}} * \frac{IB_{i,s,y}}{IB_{s,y}} \quad (5)$$

A last functional expansion of the decomposition can be made on public investment to assess the differentiated contribution of internally funded (*ii*) and externally funded (*ei*) budgeted capital expenses on investment budget discrepancies:

$$WBD_{i,s,y} = \frac{E_{ii,s,y} - IB_{ii,s,y}}{IB_{i,s,y}} * \frac{IB_{ii,s,y}}{IB_{i,s,y}} + \frac{E_{ei,s,y} - IB_{ei,s,y}}{IB_{i,s,y}} * \frac{IB_{ei,s,y}}{IB_{i,s,y}} \quad (6)$$

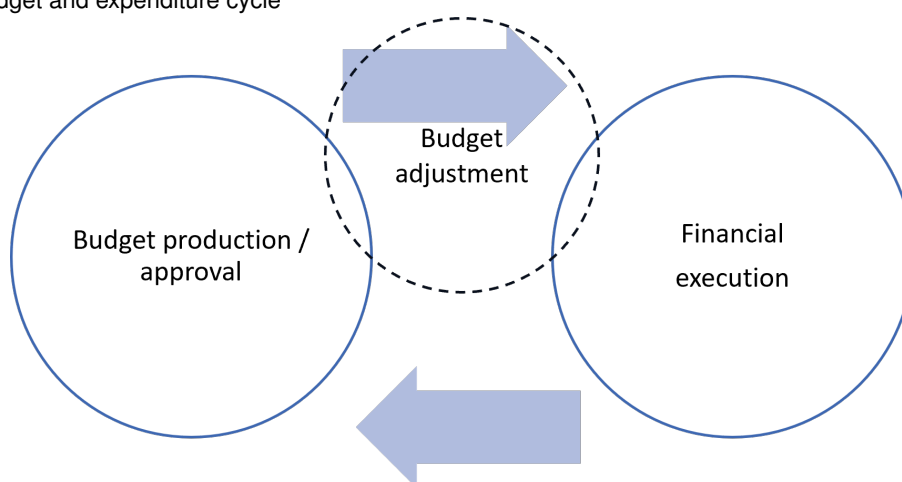
With these three levels of functional/sectoral decomposition, it is possible to make assertions on:

- a. The level of budget reliability in each year, overall, for each specific sector of public expenditure, and within it, in current and investment expenditure (both internally and externally funded), by measuring their respective weighted budget discrepancies.
- b. The relative contribution of each component's weighted budget discrepancy in each year by multiplying it by its respective expenditure share.

This decomposition will be calculated for overall and sector-level expenditures.

The procedural decomposition can be produced by assessing the possibility for the government to adjust its budgetary limits twice—the last being in November—under article 15 of *Law 14/2020* of 23 December (SISTAFE⁴ Law). This gives rise to three key 'moments' in the budget cycle: budget production (and approval), generating the initial budget (*IB*); budget adjustment(s), generating the adjusted budget(*AB*); and financial execution (*E*), as presented in the budget report (see Figure 1).

Figure 1: Budget and expenditure cycle



Source: authors' elaboration.

The procedural decomposition will be as such:

⁴ State Financial Administration System (*Sistema da Administração Financeira do Estado*)

$$WBD_y = \underbrace{\frac{AB_y - IB_y}{IB_y}}_{\text{Budget Adjustment}} + \underbrace{\frac{E_y - AB_y}{AB_y}}_{\text{Deviation in Execution}} * \frac{AB_y}{IB_y} \quad (7)$$

In this decomposition, total weighted budget discrepancies result from the within-fiscal-year budget adjustment and the deviation in budget execution once adjusted.⁵

As such, the procedural decomposition assists in asserting whether budget adjustments are induced towards execution, reducing what would otherwise be higher budget discrepancies. It will be calculated for overall and sector-level expenditures and government revenues.

3 Data

In our study, we use public data available online on the Government of Mozambique’s Ministry of Finance website to retrieve and analyse the official figures of the initial and adjusted budgets and corresponding public expenditures. We focus on the social sectors—education, health, social protection, and public works—and we also present some information on the government revenues budget credibility. It should be noted that this analysis relies solely on public finance management instruments produced by the Government of Mozambique. Therefore, it cannot account for international cooperation funds committed off-budget nor the financial execution of public services funded by these funds.

For the approved budget (or *initial budget*) figures, we rely on the following sources: the *Budget Law (Lei do Orçamento / Lei do PESOE)*, *State Budget Proposal (Proposta de Lei do Orçamento / Proposta de Lei do PESOE)*, the first *Budget Execution Report (Relatório de Execução do Orçamento do Estado Jan-March, REO)* of the fiscal year, and the *Annual Budget Execution Report (Relatório de Execução do Orçamento do Estado Anual Jan-Dez, REO)*.

The *Budget Law* is the Government of Mozambique’s legal instrument that outlines its financial plan. It is approved by the National Government and enshrined in the country’s parliamentary records and publication, the *Boletim da República* (Republic’s Bulletin, BR), from where the data we use was extracted. The figures in the budget law are a more accurate representation of initial budget figures for both planned expenditure and projected revenue. However, as recorded in the BR, it tends to be less detailed than needed, so it is mainly used to get figures on initial expenditure and revenue.

⁵ It should be noted that the official general accounts only inform on the latter: the deviation in budget execution against the already adjusted budget.

The *Budget Proposal* is the government's annual financial plan, detailing revenue sources and expenditure allocations for a fiscal year. After being produced by the government, it is debated and approved by the legislature. Once enshrined in the law, government agencies are responsible for implementing it.

The budget proposal produces initial budget figures for both revenue and budget allocation. The version submitted to be signed into law might contain minimal changes compared to the budget plan signed into law. To ensure minimal differences, we contrast the budget, sector, and functional figures in the *Budget Proposal* and *Law*.

The *REO* is a financial report that provides an overview of the government's budget execution and financial performance at the state and subnational levels. The report is produced monthly, with particular attention given to the quarterly, semestrial, and yearly REOs. It reports on revenue targets, collection, and current expenditure⁶ targets and execution for different government levels, functions, and programmes. A digital version is made available to the public on the Ministry of Finance's website and sent to the Parliament for oversight and scrutiny. It is possible to obtain a physical version through the Ministry's archives.

The REO is, therefore, an essential public finance management tool that promotes transparency and accountability in government finances through its periodical public release. It helps both government officials and citizens to understand how public funds are allocated and spent, in other words, how they are managed.

The *first quarter REO* provides an interim assessment of the government's budget execution for the initial three months of the fiscal year. In this study, to fill in information gaps in the approved state budget and the budget proposal, we assume that the figures available in the REO first quarter represent a version of the initially approved budget before any budget adjustment. However, to ensure that differences between the budget law and REO first quarter are minimal, we compare the overall, sectoral, and functional budgets for the years we use the first quarter report.

For the adjusted budget figures, we rely on the following sources: the *annual REO* and the *State General Accounts (Conta Geral do Estado, CGE)*.

The *annual REO* produced at the end of the year contains data on the latest budget, revenue targets, and execution rate. For this analysis, the last budgeted expenditure and revenue targets are obtained using *Mapa III-3: Execução do Orçamento do Estado Resumo da Despesa*, which has budget information following a functional classification such as education, health, water, social protection, and other relevant government sectors.

⁶ In Portuguese, it reads as '*despesa de funcionamento*'.

The *State General Accounts (CGE)* is a comprehensive financial statement that summarizes the Mozambican Government's economic activities over a fiscal year while also assessing the performance of state bodies and institutions. It documents revenue, expenditures, and financial transactions from all government agencies for a given year. This document is made publicly available by the Ministry of Finance, allowing it to be reviewed by experts and lawmakers, which helps ensure transparency and inform future financial decisions.

The figures reported in the CGE will, generally, be similar to those reported in the annual REO. However, the CGE is submitted to the Parliament and the Administrative Court (Tribunal Administrativo, TA), where its figures are reviewed and institutional performance is incorporated. After review and comments from the TA, the CGE is resent to Parliament for approval. This process makes the CGE relatively more accurate than the yearly REO.

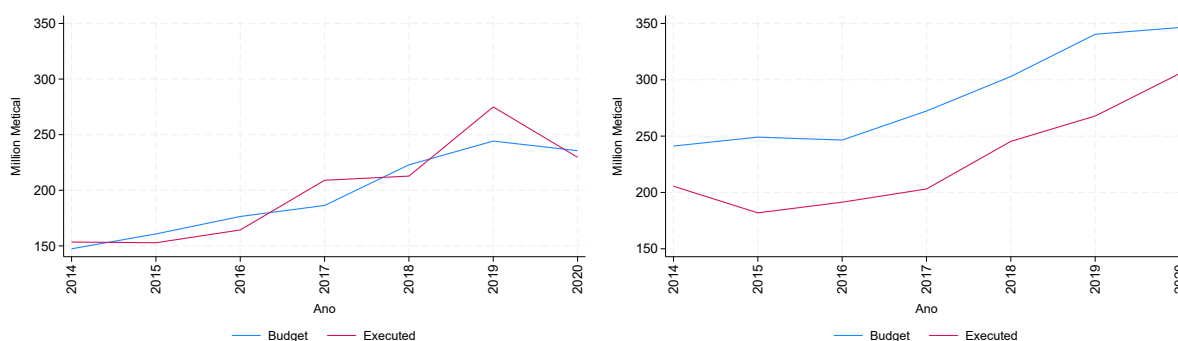
The document contains the latest figures on the projected revenue and expenditure and their respective execution. For this analysis, we consider as an *adjusted budget* the latest expenditure and revenue targets obtained from *Mapa III-3: Execução do Orçamento do Estado*. This table, with the same name and structure as the one in the REO, contains updated budgetary and financial execution information following the same functional classification, again identifying the social sectors of interest, among other relevant government sectors.

Finally, for the financial execution figures, we rely, in general, on the *CGE*. For public works specifically, we rely on the *annual REO* for the years 2012 and 2013 and on the *first quarter REO* for the subsequent years, from 2014 to 2021.

4 Budget discrepancies

From 2014 to 2020, two very clear patterns become evident (see Figure 2): (1) relatively steady nominal increases in government revenue and expenditure and (2) a consistent under-execution of the expenditure budget (as per Figure 2b). Less visible is a pattern of under or over-execution of the revenue budget (Figure 2a).

Figure 2: Government revenue and expenditure



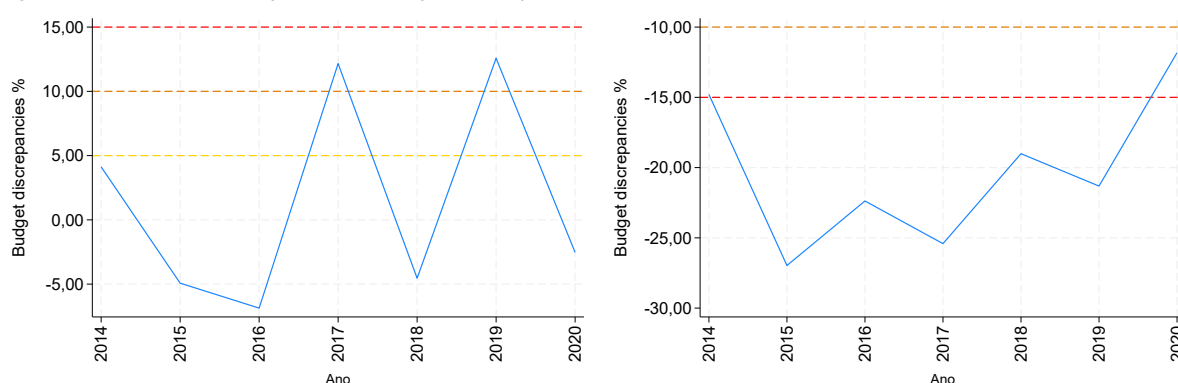
(a) Government revenue

(b) Government expenditure

Source: authors' calculations using data mentioned in Section 3.

The systemic under-execution of budgeted government expenditure is again evident in Figure 3b, with budget discrepancies above 15% (level D under PEFA) in most of the years. While reporting values within the A and B levels of revenue budget reliability in most years, Figure 3a confirms a significant volatility in the adherence of collected government revenues to the originally budgeted values.

Figure 3: Revenue and expenditure budget discrepancies



(a) Revenue discrepancies

(b) Expenditure discrepancies

Source: authors' calculations using data mentioned in Section 3.

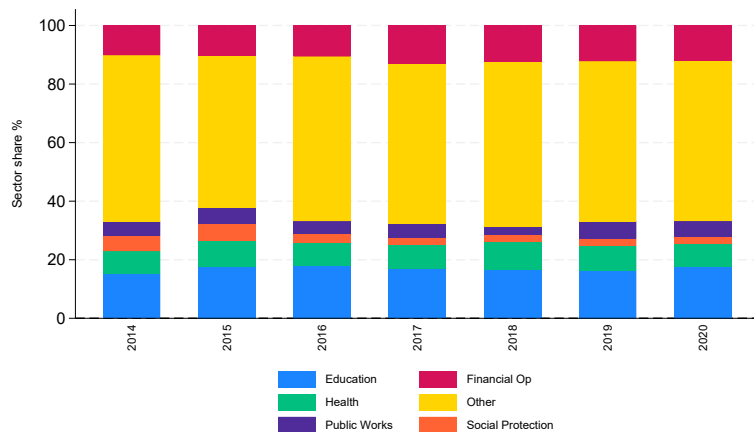
A comparison between Figures 3a and 3b suggests no evident links between revenue and expense discrepancies. An acceptable prior would be that expenditure budgets are under-executed due to revenue under-execution. However, such a link seems unlikely. Most notably, we find higher levels of expenditure under-execution in all years, even in years such as 2015 and 2019, where there was high under-execution of expenditure concurrent with high over-execution of revenues.

In the next session, we will discuss the public service sectors' contribution to budget reliability, focusing mainly on social sectors.

4.1 Social sectors

The Government of Mozambique’s social sectors—education, health, social protection, and public works (encompassing infrastructures such as housing, water and sanitation)—represent close to 40% of the budgeted expenses, as shown in Figure 4. Approaching 20%, education is the largest of these sectors, followed by health (near 10%). Since 2014, financial operations have consumed a share of public expenditure equivalent to or even higher than health.

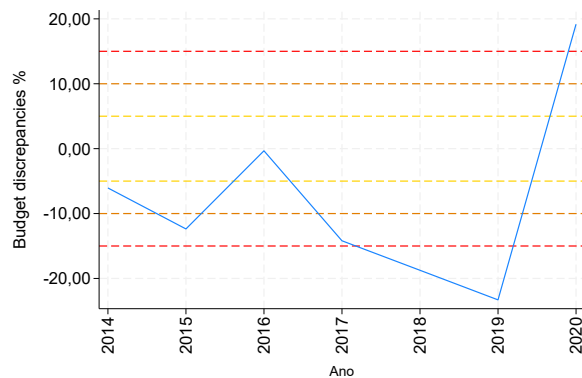
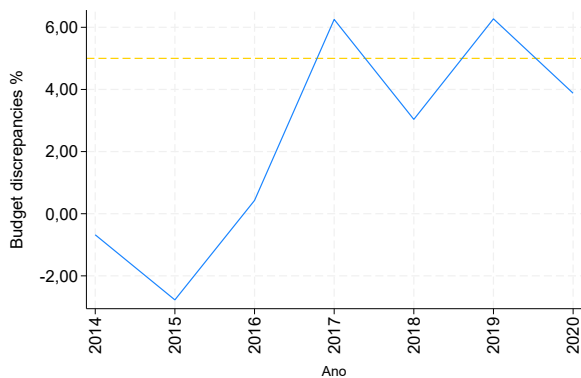
Figure 4: Sector shares of total expenditure



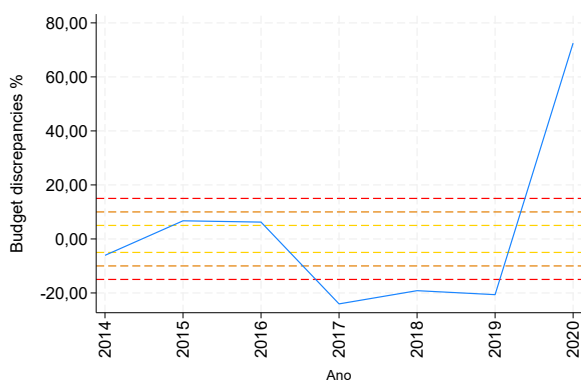
Source: authors’ calculations using data mentioned in Section 3.

In Figure 5, we present a cursory comparison of budget discrepancies in the four social sectors. It shows very different levels of budgetary credibility among them. Education displays the highest, followed by health, while social protection and public works record much lower levels. Other than with education, it shows a high incidence of under-execution of the budgeted expenses. Finally, it suggests worsening budget credibility among social sectors throughout the years under analysis.

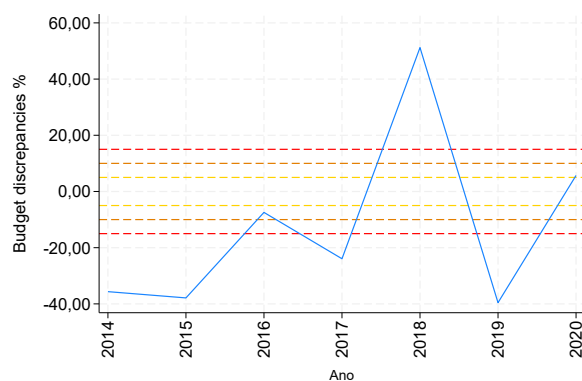
Figure 5: Budget discrepancies in the social sectors



(a) Education



(b) Health



(c) Social protection

(d) Public works

Source: authors' calculations using data mentioned in Section 3.

While, as reported above, social sectors represented nearly half of the total government expenditure, from 2015 onward most of the budgetary discrepancies were due to financial operations and other public sectors. Throughout the period under analysis, almost all sectors contributed to the overall trend of under-execution of budgeted funds. In 2020, however, during the COVID pandemic, the over-execution of health, social protection, and public works made these sectors shift their contribution to overall budget discrepancies. Conversely, that was one of the few years we found under-execution of the education expenditure budget.

Figure 6: Sector contribution to total budget discrepancy



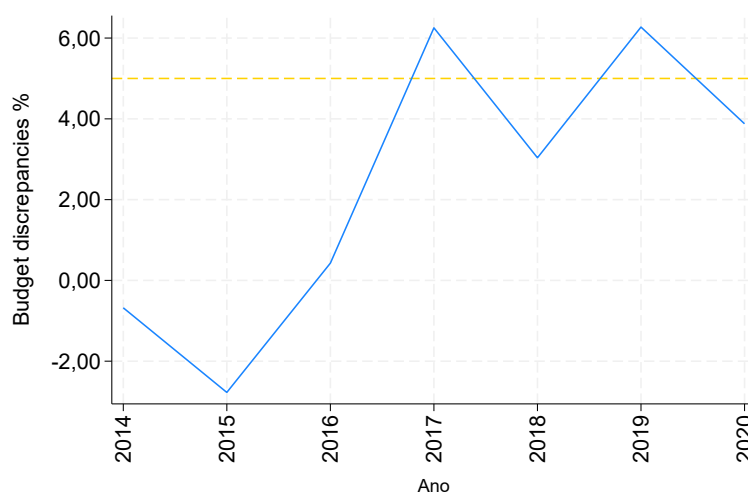
Source: authors' calculations using data mentioned in Section 3.

The following subsections will deepen the analysis of each of the social sectors.

4.2 Education

In most years, the education budget appeared to be within level A of reliability, with discrepancies below 5% (as seen in Figure 7). We find, however, some suggestions of deterioration from 2016 onward. From 2015 to 2019, expenditure on education exceeded the initial budget, having exceeded by more than 5% in 2017 and 2019.

Figure 7: Education budget discrepancies

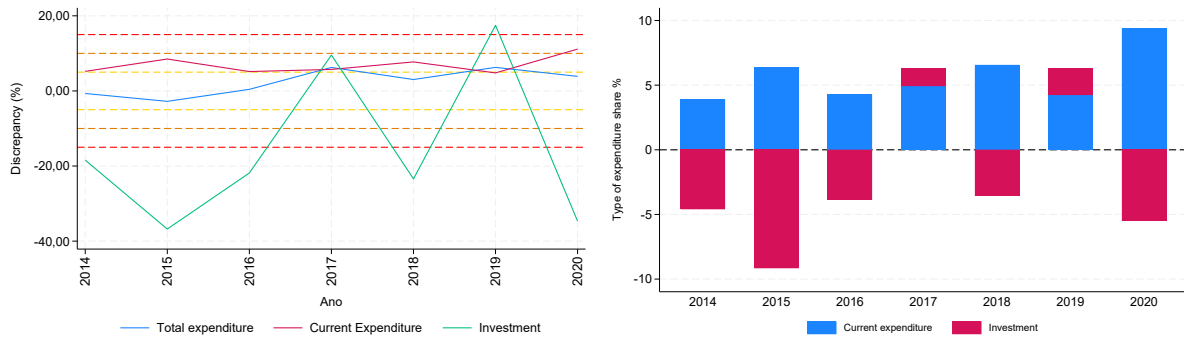


Source: authors' calculations using data mentioned in Section 3.

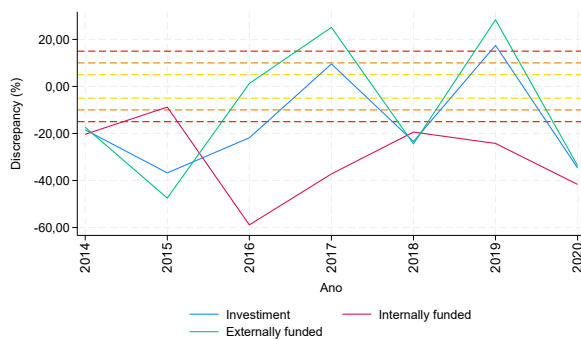
Figure 8 presents the decomposition of budgetary discrepancies in education. The first two panels allow us to analyse how current and investment expenses contributed to budget credibility in this sector. In Figure 8a, we find an indication of relatively high budget credibility of public expenditure in education, but lower budget credibility of current expenditure and even lower of investment. Furthermore, we find in Figure 8b that below-budget investment expenses

appear to compensate for over-budget current expenses, averaging them out when added into the overall education budget execution. While this evidence doesn't allow us to affirm it definitely, it suggests the use of funds initially budgeted for investment to cover current functioning financial needs. The two years when that compensation didn't occur, 2017 and 2019, coincided with a fall in education budget reliability to level B.

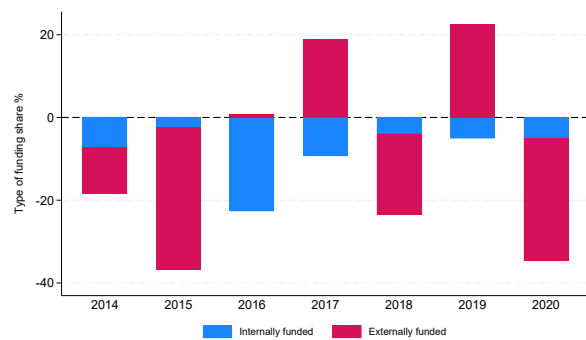
Figure 8: Decomposition of discrepancies in education



(a) Discrepancies by type of cost



(b) Contribution



(c) Discrepancies in investment by source

(d) Contribution

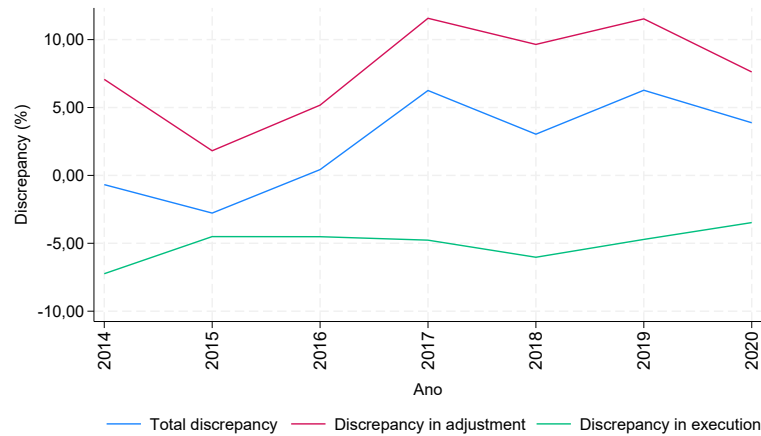
Source: authors' calculations using data mentioned in Section 3.

The decomposition of budgetary discrepancies in investment expenditure reveals more. Figure 8c shows evidence of frequent and significant under-execution of internally financed investment budgets. In 2016, 2017, and 2019, externally funded education investment significantly exceeded the budgeted amounts, partially mirroring the under-execution of internally funded investment. Nevertheless, given the share of externally budgeted investment, Figure 8d indicates that it is the execution of externally funded investment expenditure that appears to have been the main driver weakening the reliability of the education budget. This should, however, be read against the previously noted over-execution of current education budgets. A possibility that may merit further analysis is the use of externally funded investment resources to cover under-budgeted current education expenditures.

Further insights on the budget management of education expenditure can result from analysing the process decomposition, as presented in Figure 9. Repeated under-execution of the education budget would trigger a recommendation for corrections to be put in place at the following

budgeting and budget adjustment exercises. However, budget adjustments appear to add to an over-budgeting bias, leading to what would otherwise be more minor levels of discrepancy of execution against the adjusted budget.

Figure 9: Process decomposition of discrepancies in education



Source: authors' calculations using data mentioned in Section 3.

In summary, a decomposition analysis of budget discrepancies in education expenditure suggests a trend of over-execution of current expenses, partially compensated by under-execution of investment expenses, especially that of externally funded investment. Process decomposition suggests that budget adjustments tend to further weaken budget credibility.

4.3 Health

The reliability of health's budget, presented in Figure 10, appears to have been lower than that of education, only reaching level A in 2016. There is also a suggestion of deterioration throughout the period under analysis.

Figure 10: Health budget discrepancies



Source: authors' calculations using data mentioned in Section 3.

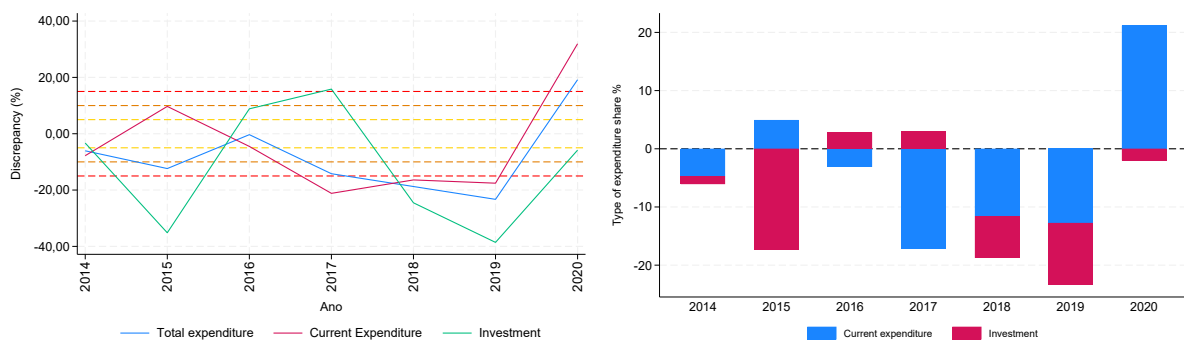
Both current and investment expenses appear to have been over-budgeted throughout most of the fiscal years. In 2020, the year of COVID, current health expenditure significantly exceeded its budget.

The budget of current health expenses is relatively more reliable than the budget of investment expenses. However, even the health current expenses budget showed significantly low reliability. Given its relative weight in the overall health expenditure, the discrepancies in current expenses appear to have been the most significant driver weakening this sector's budget credibility.

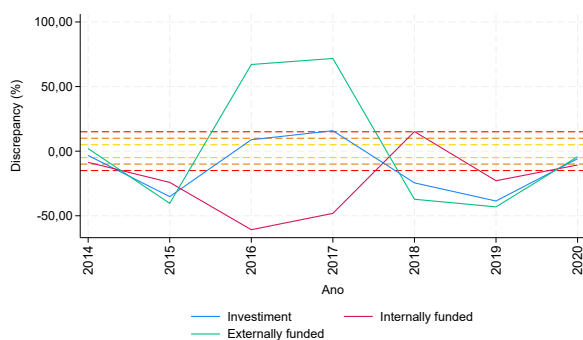
Externally funded investment appears to have been the main contributor to a weaker reliability of the overall investment budget in health.

Also, as suggested regarding education, there is evidence of frequent and significant over-budgeting of internally financed health investment, which appears to be partially compensated by a mirroring over-spending of externally funded investment.

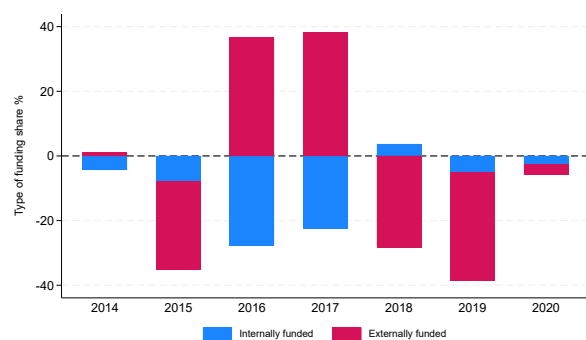
Figure 11: Decomposition of discrepancies in health



(a) Discrepancies by type of cost



(b) Contribution



(c) Discrepancies in investment by source

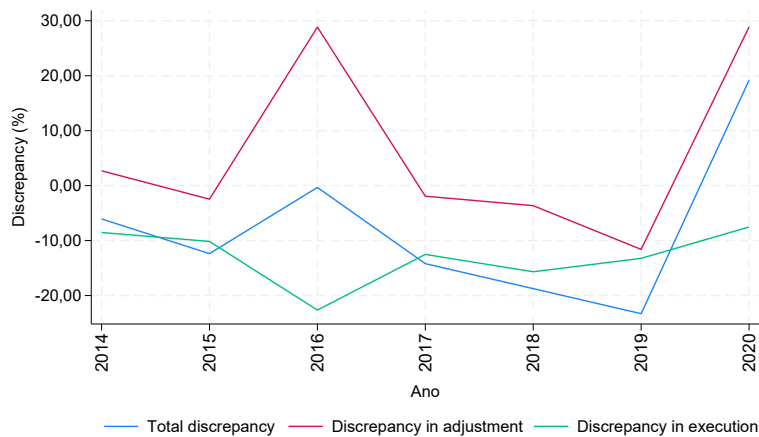
(d) Contribution

Source: authors' calculations using data mentioned in Section 3.

We don't seem to find, in health and most years, the same kind of over-budgeting bias in the adjustments introduced by the government as we found in education. The exception appears to be in 2016, when an adjustment could have induced a discrepancy between execution and

the initial budget, which did not occur. However, there is no evidence that adjustments led to improved reliability in execution.

Figure 12: Process decomposition of discrepancies in health

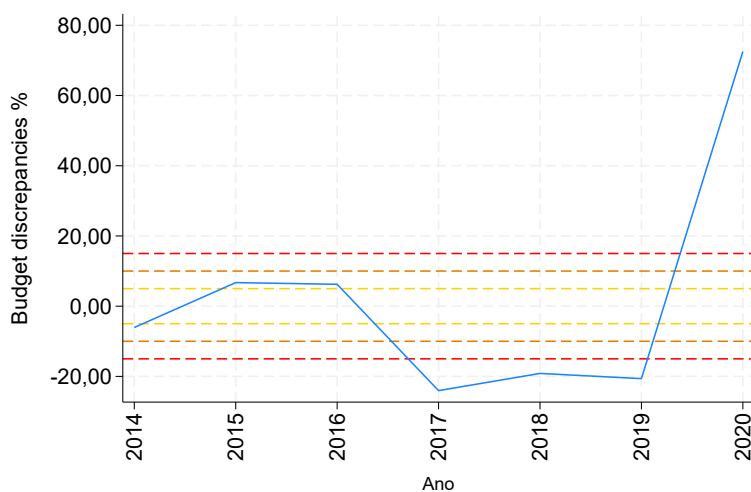


Source: authors' calculations using data mentioned in Section 3.

4.4 Social protection

We find that the budget reliability of social protection was generally weak, as presented in Figure 13, staying at level D in most of the years between 2014 and 2020, with a strong under-execution tendency. We also find it deteriorating during the period 2016–20.

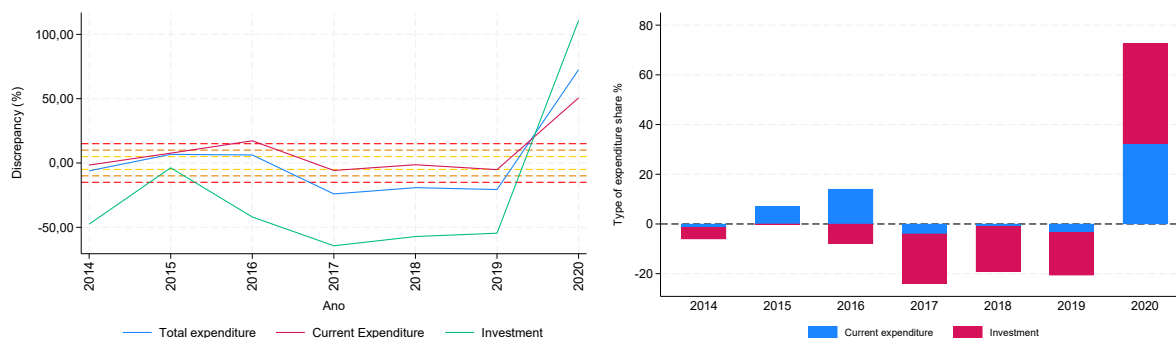
Figure 13: Social protection budget discrepancies



Source: authors' calculations using data mentioned in Section 3.

As displayed in Figure 14a, current and investment expenses appear to have been under-executed in this sector. Noticeably, overall budget discrepancies appear to follow current expenditure discrepancies closely. Figure 14b shows that both types of expenditure jointly contribute to the under-execution of social protection budgets. In 2020, however, due to the COVID-related social protection effort, investment expenditure drove the discrepancies towards significant over-execution of the initial budgets.

Figure 14: Decomposition of discrepancies in social protection



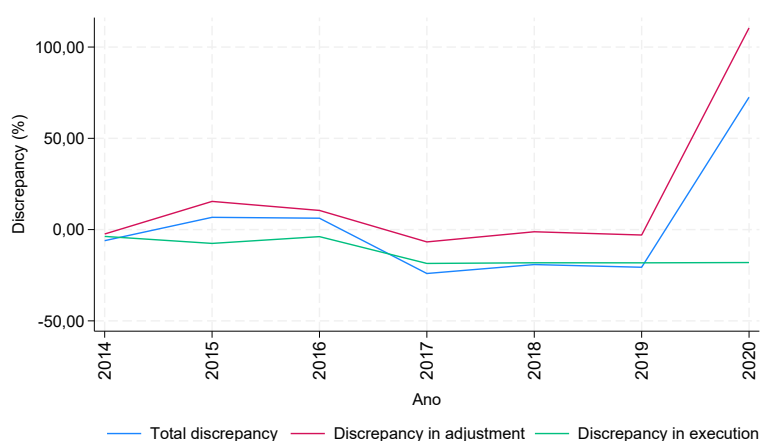
(a) Discrepancies by type of cost

(b) Contribution

Source: authors' calculations using data mentioned in Section 3.

In this sector, as shown in Figure 15, most of the budget discrepancies appear to occur at adjustment, already predicting some of the under-execution. That, however, exceeds even the budget adjustment. The only exception was the 2020 COVID year, which should be considered as a point shock.

Figure 15: Process decomposition of discrepancies in social protection

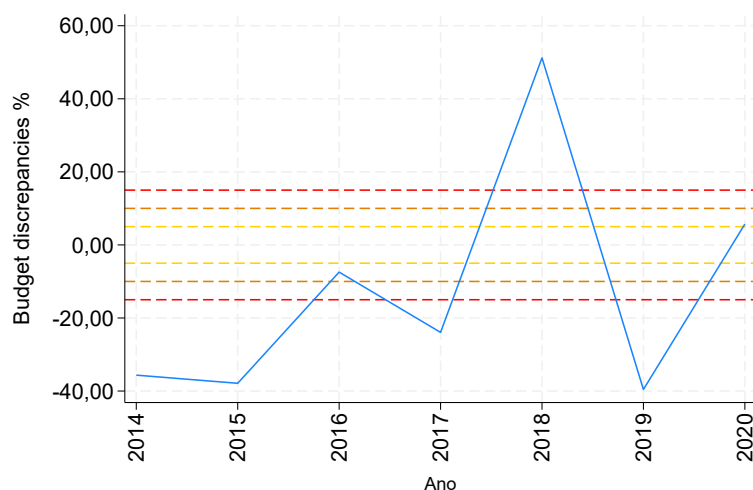


Source: authors' calculations using data mentioned in Section 3.

4.5 Public works

Throughout the period and as portrayed by Figure 16, the budget reliability of public works has been notably weak, with discrepancies significantly higher than the 15% level D threshold in almost all years under analysis. Furthermore, we find no signs of improvement from 2014 to 2020.

Figure 16: Public works budget discrepancies

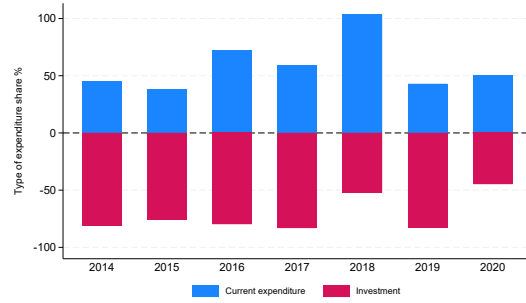
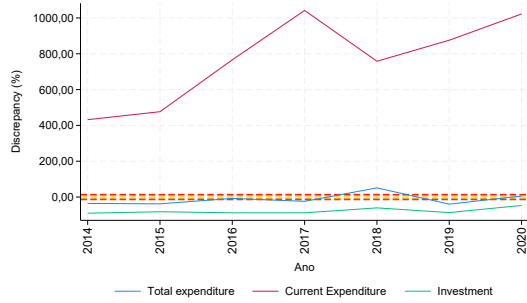


Source: authors' calculations using data mentioned in Section 3.

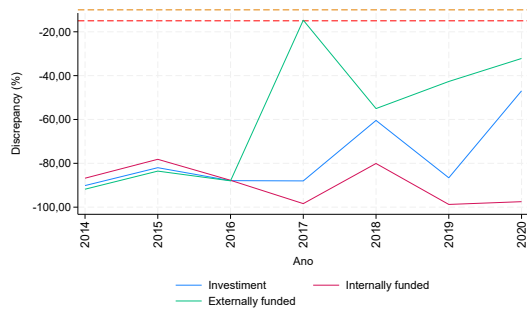
Figures 17a and 17b show an extreme version of the dynamic existing in education. Budget discrepancies in current and investment expenditure seem to contribute symmetrically to the overall public works budget's weak reliability. This translates into current expenditures that ran four to tenfold that of what had been budgeted, with a strong suggestion that under-executed investment budgets are financing this excess.

This insight is complemented by what is presented in Figure 17c. It becomes evident that there is close to zero implementation of internally funded investment budgets. Concurrently, there is evidence, both in Figure 17c and Figure 17d, that externally funded investment expenditures budget discrepancies drive the under-execution of the overall investment budget. The 2020 COVID shock appears to have driven the over-execution of the externally financed public works investment budget.

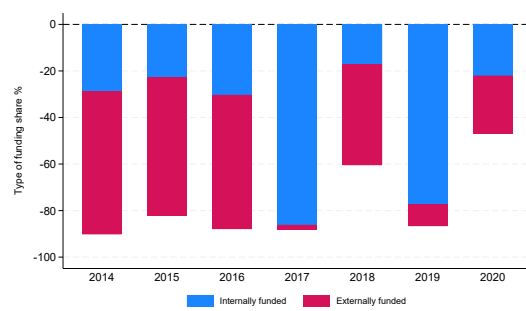
Figure 17: Decomposition of discrepancies in public works



(a) Discrepancies by type of cost



(b) Contribution



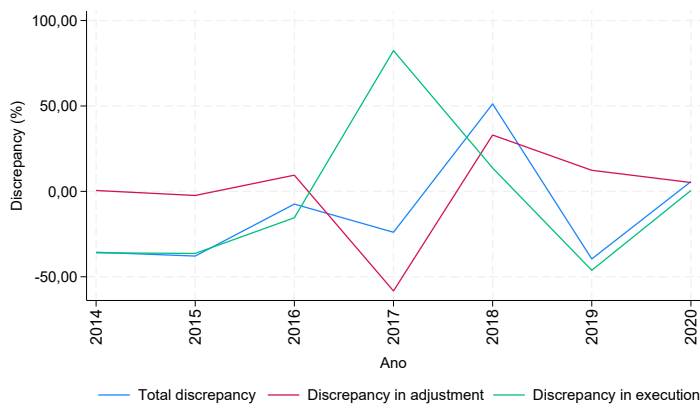
(c) Discrepancies in investment by source

(d) Contribution

Source: authors' calculations using data mentioned in Section 3.

Figure 18 shows a very erratic profile of budget adjustments and execution discrepancies against the adjusted budget in the case of public works. In many years, over/under-budgeting in adjustment corresponded to under/over-execution of the adjusted budget, indicating that the instrument of budget adjustment wasn't used to correct initial budget weaknesses.

Figure 18: Process decomposition of discrepancies in public works



Source: authors' calculations using data mentioned in Section 3.

5 Conclusion

In this paper, we sought to contribute to analysing budget reliability, the first pillar of Public Expenditure and Financial Accountability. To do this, we analysed the budget, public revenue, and public expenditure of the Government of Mozambique for the fiscal years 2014 to 2020. We focused on four social sectors: education, health, social protection and social works.

We found a consistent under-execution of the Government of Mozambique's expenditure budget that does not track an equivalent under-execution of its revenue budget. Meanwhile, we also found that the overall indicator of budget reliability hides significant differences in the budget credibility of different sectors. Notably, we found that social sectors contribute more to budget credibility than their weight in overall public expenditure.

The budgeting and execution of public investment, and even more so, of externally financed public investment, appears to be a significant weakening factor of budget credibility. In some cases, there is a suggestion that resources originally budgeted for investment were possibly used to fund current expenditures. This signal could be confirmed through a more in-depth analysis.

Finally, we did not find strong evidence that mid-fiscal-year budget adjustments contribute to higher budget reliability.

Overall, we found that the proposed decomposition adds information which can be used to guide in-depth analyses of budget discrepancies. This simple method can be easily applied by budget oversight entities, be it within the government itself, by planning units within the several ministries, and more so by the Ministry of Finance. The Parliament budget oversight unit and the Accounts Court can also quickly learn and use it. It can, finally, be learned and used by civil society budget watchdogs, as it relies on public information.

The adoption of this decomposition method will provide tools to improve budget management by sector ministries, towards an improved and more credible budget execution. Without much effort, it can also be expanded to other reported expenditures, including other ministries and budget units, central and decentralized.

As a caveat, this tool relies on complete information regarding public revenues and expenditure. In countries where a bigger share of public expenditure is funded via off-budget mechanisms, including direct payment by international cooperation agencies, the correct analysis requires those expenditures and respective budgets to be disclosed and incorporated in the calculations.

References

- Chen, C., and Neshkova, M. I. (2020). 'The Effect of Fiscal Transparency on Corruption: A Panel Cross-Country Analysis'. *Public Administration*, 98(1): 226–43. <https://doi.org/10.1111/padm.12620>
- de Renzio, P., Lakin, J., and Cho, C. (2019). 'Budget Credibility Across Countries: How Deviations Are Affecting Spending on Social Priorities'. Paper. Washington, DC: International Budget Partnership. Available at: <https://internationalbudget.org/publications/budget-credibility-across-countries/> (accessed in February 2024)
- de Renzio, P., and Wehner, J. (2017). 'The Impacts of Fiscal Openness'. *The World Bank Research Observer*, 32(2): 185–210. <https://doi.org/10.1093/wbro/lkx004>
- Goryakin, Y., Revill, P., Mirelman, A. J., Sweeney, R., Ochalek, J., and Suhrcke, M. (2020). 'Public Financial Management and Health Service Delivery: A Literature Review'. In P. Revill, M. Suhrcke, R. Moreno-Serra, and M. J. Sculpher (eds), *Global health economics: Shaping health policy in low-and middle-income countries* (pp. 191–215). Singapore: World Scientific Publishing Company. https://doi.org/10.1142/9789813272378_0007
- Montes, G. C., and Acar, T. (2020). 'Fiscal credibility, target revisions and disagreement in expectations about fiscal results'. *The Quarterly Review of Economics and Finance*, 76(): 38–58. <https://doi.org/10.1016/j.qref.2019.06.002>
- PEFA Secretariat (2019). *Framework for Assessing Public Financial Management*. Washington,DC: Public Expenditure and Financial Accountability (PEFA). Available at: https://www.pefa.org/sites/pefa/files/resources/downloads/PEFA%202016_latest%20version_with%20links%20%282%29.pdf (accessed in February 2024)
- Robinson, T., McGrann, J., Kadir, A., Jiménez-Ontiveros, I., and Barton, U. A. (2021). 'Analyzing the Link between PFM System Strength and Public Investment Performance'. PEFA Research Paper. Washington, DC: Public Expenditure and Financial Accountability (PEFA).