



Uncovering the Costs of the War in Cabo Delgado

A Comprehensive Analysis of
Fiscal Impacts and Multidimensional Challenges



CENTRO DE INTEGRIDADE PÚBLICA
Anticorrupção - Transparência - Integridade

Maputo, November 2023

Datasheet

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Photograph: Unsplash

Propriety: Centro de Integridade Pública



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Abstract

The ongoing conflict in Cabo Delgado, Mozambique, has caused extensive human, social, and economic impacts, affecting both the state and its citizens. Alongside human rights violations and displacement of over one million people, the conflict strains Mozambique's fiscal resources significantly. This study quantifies the conflict's fiscal impact, emphasizing its toll on the national budget. Through structural-break analysis, this study identifies a surge in national security expenditures, totaling an estimated 106.8 billion MZN (1.69 billion USD) from 2018 to 2022. A disaggregated view reveals particularly high increments in defence (43.6 billion MZN) and in security and public order (60.4 billion MZN) expenditures. Intriguingly, allocations to intelligence services have been less directly affected despite escalating violence and terrorist attacks, hinting at the potential influence of other political considerations regarding this expenditure item. Beyond fiscal implications, delays in the Mozambique Liquefied Natural Gas (LNG) project due to the conflict result in an estimated loss of 383.4 billion MZN (6.06 billion USD) in potential government revenues under current market conditions. Collectively, these additional conflict-related national security expenditures and lost revenues from the gas project total approximately 490.2 billion MZN (7.75 billion USD). The study also reveals the conflict's adverse effects on education. Conflict-induced rises in illiteracy contribute to an estimated loss to the regional GDP of Cabo Delgado of up to 22.7 billion MZN (0.36 billion USD). Human rights abuses, including sexual exploitation that particularly affect women, further compound the crisis. Despite substantial international aid focused on military efforts, the humanitarian response remains underfunded. This study highlights immediate conflict-related expenditures and long-term opportunity costs. By informing policymakers of the conflict's severe and far-reaching multidimensional repercussions, it serves as an important resource for decision-making.

1. Introduction

The conflict in Cabo Delgado, Mozambique, which started in late 2017, involves an intricate mix of local militants driven by socio-economic grievances and foreign jihadists. According to the Human Rights Watch (2023), the humanitarian situation in the region worsened significantly in 2022 due to intensified attacks from an ISIS-linked group locally known as Al-Shabab.¹

As reported by the International Crisis Group (2023a), the situation in Cabo Delgado remains critical.² Ongoing Islamic State attacks have prompted the Mozambican government to ramp up counter-insurgency efforts, supported by troops from Rwanda and the Southern African Development Community (SADC), known as SAMIM (SADC mission to Mozambique). The SADC extended its mission for another year as of July 2023, with potential withdrawal by 2024 or 2025. However, it acknowledged that more needs to be done to empower local forces. Civilians, primarily women and children, continue to endure risks ranging from gender-based violence, sexual exploitation and food insecurity to forced displacement.^{3,4}

Over 4,500 people have been killed, and more than a million displaced, according to updated reports by the International Crisis Group. An August 2023 report from the International Crisis Group adds that insurgents, primarily affiliated with the Islamic State, are targeting both government and SADC forces.⁵ Alongside combat, these militants are also engaging in commercial interactions with local communities to gain their favor, adding another layer of complexity. Government security forces are implicated in human rights violations due to their heavy-handed response, manifesting in actions such as excessive force and arbitrary arrests. As per the International Crisis Group (2023b), there are concerning levels of indiscipline within security forces, exacerbated by delayed salary payments to police officers and soldiers. The organization also reports cases involving police officers in kidnappings for ransom, further aggravating the security situation.

Overall, the area remains a high-risk conflict zone, facing ethical and operational challenges, as insurgents continue to employ guerrilla tactics. This threatens Mozambique's national stability at a pivotal moment for natural gas development and elections. Given the evolving dynamics of the conflict, a financial and social impact assessment is paramount.

Amidst this complex backdrop, this paper aims to provide insights by quantifying the fiscal impacts of the conflict in Cabo Delgado. Our statistical data analysis reveals that, up to 2022, shifts in spending on defence, security and public order have resulted in additional expenditures of about 106.8 billion MZN (1.69 billion USD). Moreover, under the prevailing high oil and gas prices, the state is projected to forfeit around 383.4 billion MZN (6.06 billion USD) in government revenues owing to the deferral of the Mozambique LNG project. In sum, these conflict-induced additional expenditures and unrealized government revenues approximate to **490.2 billion MZN (7.75 billion USD)**. This amount signifies a substantial increase compared to a previous

1 Human Rights Watch (2023). "Mozambique". Accessed on 1 September 2023 at <https://www.hrw.org/africa/mozambique>.

2 International Crisis Group (2023a). "Mozambique". Accessed on 1 September 2023 at <https://www.crisisgroup.org/africa/east-and-southern-africa/mozambique>.

3 CIP (2023a). "The Other Side of the War: Prostitution and Sexual Exploitation of Displaced Women in Cabo Delgado". Accessed on 21 September 2023 at <https://www.cipmoz.org/pt/2023/05/29/the-other-side-of-the-war-prostitution-and-sexual-exploitation-of-displaced-women-in-cabo-delgado/>.

4 UNHCR (2023). "Cabo Delgado GBV Factsheet - June 2022". Accessed on 21 September 2023 at <https://reliefweb.int/report/mozambique/cabo-delgado-gbv-factsheet-june-2022>.

5 International Crisis Group (2023b). "Insurgent activity against govt forces remained high in Macomia district in northern Cabo Delgado province". Accessed on 1 September 2023 at <https://www.crisisgroup.org/crisiswatch/september-alerts-and-august-trends-2023#mozambique>.

estimate by CIP (2021a), which—using a different methodology—calculated the fiscal impact of the war to be 64.17 billion MZN (1.01 billion USD) up to 2020.⁶

Moreover, the social fabric of the region is deteriorating, with Cabo Delgado standing out as the only province in Mozambique to witness a decline in literacy rates since the conflict’s onset. According to data from Mozambique’s National Institute of Statistics (INE) there has been an alarming 8.7% spike in illiteracy rates from 2020 to 2022.^{7,8} We estimate that this educational shock could result in a relative decline in the Cabo Delgado’s GDP of as much as 22.7 billion MZN (0.36 billion USD).

Understanding these multi-faceted costs provides essential insights for a range of stakeholders, from policymakers to international organizations, as they navigate the conflict’s complexities and seek effective strategies for intervention and recovery.

Following this introduction (section 1), the rest of the paper is organized as follows. Section 2 examines the change in spending on defence, security and public order. Section 3 highlights shifts in educational spending. Section 4 demonstrates the financial losses incurred due to the delay of the Mozambique LNG project operated by TotalEnergies. Section 5 highlights reported conflict-induced impacts on women. The analysis and findings are synthesized in Section 6. Finally, Section 7 offers a set of targeted policy recommendations to address the multi-dimensional challenges arising from the conflict.

2. Changes in National Security Expenditures

2.1 Regression Model

To identify structural changes in national security (defence and security) expenditure patterns, we use data from the General State Account (CGE) of Ministry of Economics and Finance (MEF) from 2012 to 2022.⁹ We estimate the following equation using Ordinary Least Squares (OLS):

$$Expenditures_{it} = \alpha + \beta X_{it} + \mu_{it} \quad (1)$$

Subscript i and t denote the type of expenditures and year, respectively. α is the intercept, the vector β represents the coefficients for the variables in X , and μ is the error term. X is a vector that includes a trend variable, a binary variable named ‘*Post-2018*’ (taking the value 1 if the year is 2018 or later, and 0 otherwise), an interaction variable between the latter two variables. The variable ‘*Post-2018*’ is incorporated to account for the ramifications of the conflict that erupted in late 2017, because the first fiscal year to be fully impacted by this conflict is 2018. Lastly, X also includes a binary variable for the year 2014 to account for that year’s presidential election. This variable aims to capture potential variations in public spending due to the election. For robustness checks, we also employ an Auto Regressive Integrated Moving Average (ARIMA) model to capture potential non-stationarity and autocorrelation in the data.

6 CIP (2021a). “Controlo Externo da Despesa de Defesa e Segurança: Quanto e como gasta o Estado com a guerra de Cabo Delgado?“. Accessed on 21 September 2023 at <https://www.cipmoz.org/pt/2021/08/10/controlo-externo-da-despesa-de-defesa-e-seguranca-quanto-e-como-gasta-o-estado-com-a-guerra-de-cabo-delgado/>.

7 Instituto Nacional de Estatística (2021). “Inquérito Sobre Orçamento Familiar – IOF 2019/20“. September 2021. Relatório Final.

8 Instituto Nacional de Estatística (2023a). “Inquérito Sobre Orçamento Familiar – IOF 2022“. July 2022. Relatório Final.

9 Ministry of Economics and Finance (MEF). “Conta General do Estado (CGE).” Accessed on 29 August 2023 at <https://www.mef.gov.mz/>.

In our investigation, we first aim to estimate the conflict-induced changes in overall national security spending. This overarching analysis provides a macroscopic view of how the conflict has financially impacted the national security budget as a whole. Once we have an understanding of the total changes in national security expenditures, we delve into a more granular examination. Specifically, we break down the overall spending into its constituent categories: defence, security and public order, and intelligence. By doing so, we aim to pinpoint precisely where the most significant changes are originating.

2.2 Structural Changes in National Security Expenditures

Table 1 shows the estimation results for overall national security expenditures, defined here as expenditures on defence, security and public order, and intelligence. In 2014, which coincided with the presidential elections, our regression detected a considerable surge in Mozambique’s national security spending. This surge is quantified by a statistically significant coefficient of 19,509 million MZN, as shown in column (1) of Table 1. This means that an extra 19,509 million MZN has been spent on national security expenditures in the year 2014 than otherwise expected. This finding underscores the possible influence of electoral cycles on Mozambique’s national security budget.

Table 1 Regressions for Overall National Security Expenditures

	(1)	(2)	(3)	(4)
	OLS in million MZN	ARIMA in million MZN	OLS %	ARIMA %
Dependent variable:	National Security (overall)		Share of National Security (overall) over Total Expenditures	
<i>Intercept</i>	12915***	12915***	10.19***	10.19***
<i>Year 2014</i>	19509***	19506***	6.63***	6.63***
<i>Trend</i>	2940***	2940***	0.45	0.45**
<i>Post-2018</i>	-51369***	-51369***	-7.89*	-7.89***
<i>Trend x post-2018</i>	8081***	8081***	1.20**	1.20***
<i>F-statistic for joint hypothesis test: post-2018 = 0, Trend x post-2018 = 0</i>	72.61***		11.32***	
Estimated accumulated change in spending:	106792		55106	

Notes: Significance codes: *** p < 0.01, ** p < 0.05, * p < 0.10. The statistical estimations use data from 2012 to 2022. The Akaike information criterion (AIC) is used to select the autoregressive order (AR), the degree of differencing (I), and the moving average (MA) order of the autoregressive-moving-average (ARIMA) models.

Leading up to the emergence of conflict in Cabo Delgado, the model revealed a steady, year-over-year increase in overall national security spending of 2,940 million MZN, pointing to an already increasing trend prior 2018. Post-2018, however, the annual growth rate in national security has dramatically increased. Specifically, the rate of yearly increase in total national security spending since 2018 has escalated by an additional 8,081 million MZN compared to the rate before the conflict (statistically highly significant).¹⁰ To put it differently, since 2018, the annual increase in national security spending has surged by an extra 8,081 million MZN, over and above the already rising trend. This divergence can be visualized by comparing the trends in national security expenditures before 2018 (blue line) and after 2018 (green line) in Figure 1.

¹⁰ A Chow test validates our regression findings of a structural break presented in Table 1 by contrasting the sum of squared residuals from individual regressions conducted for the periods before and after 2018 with those from a single regression spanning the entire timeframe. We reject the null hypothesis of the Chow test, which posits that the parameters for these segmented periods are the same (*F*-statistic of 19.18).

Comparative analysis between projected nominal spending without structural changes and the actual expenditures from 2018 through 2022 suggests an aggregate increase of approximately 106.8 billion MZN attributable to the conflict (see last row of column (1) of Table 1). This marked rise in spending is crucial for understanding the financial implications of the ongoing strife on Mozambique’s national security budget.¹¹

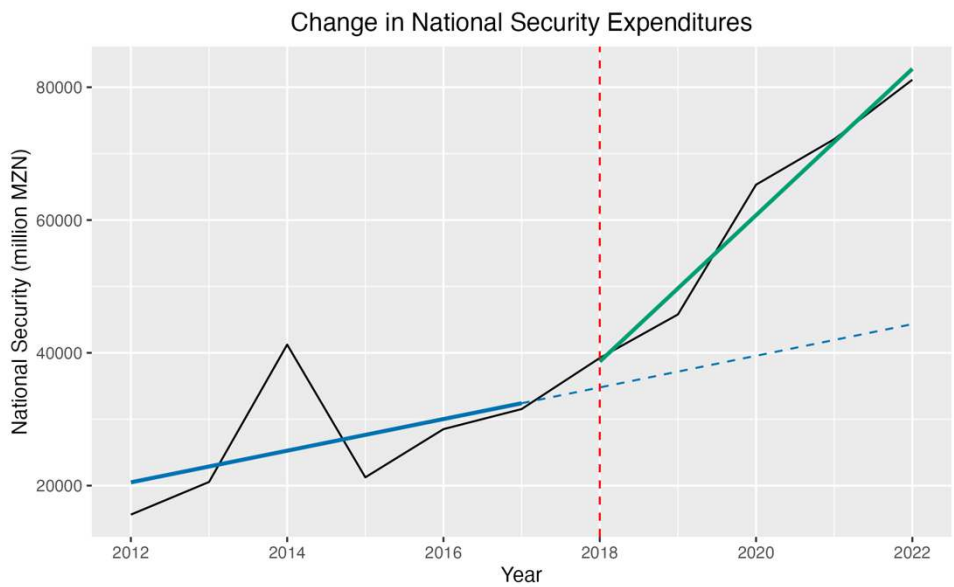


Figure 1 Overall National Security Expenditures from 2012 to 2022 (in million MZN)

In relative terms, since 2018, the trend in the share of national security expenditures over total government expenditures has also accelerated by an additional 1.20% annually, as indicated by the ‘Trend x Post-2018’ coefficient shown in column (3) of Table 1. This relative increase in the budget allocation for national security expenditures is displayed in Figure 2.

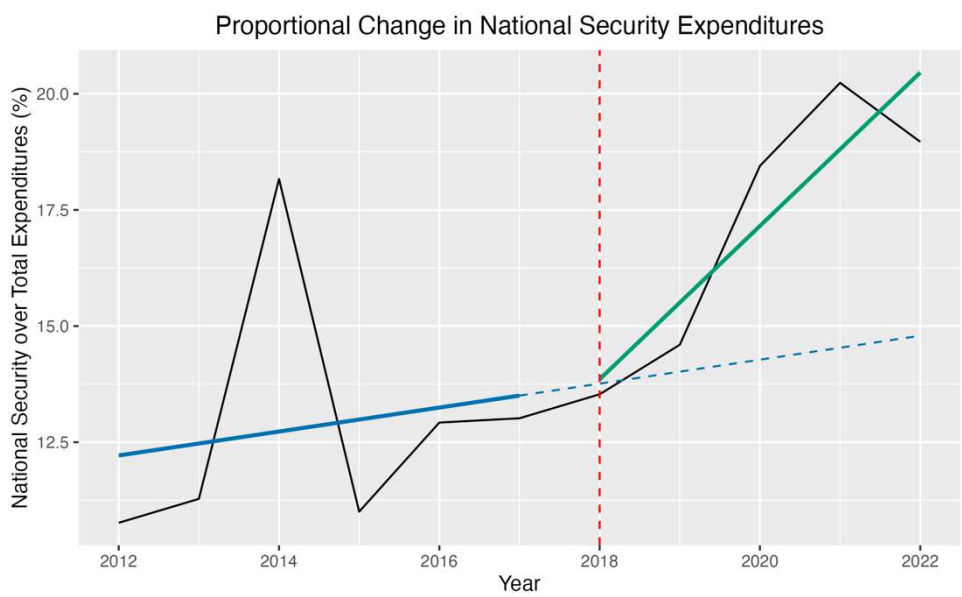


Figure 2 Overall National Security Expenditures from 2012 to 2022 (as share of total expenditures)

¹¹ In Figure 1, the increase in total spending after the year 2018 is visually represented by the area of the trapezoid formed by connecting the solid green line, the dashed red line, and the dashed blue line.

2.3 Structural Changes in Defence Expenditures

In this section, we demonstrate structural changes in defence expenditures. Table 2 shows the estimations for overall defence expenditures, as well as spending for the defence sub-groups armed forces, Ministry of Defence, and other defence expenditures. In the election year 2014, our regression analysis detected a significant surge in Mozambique's defence expenditures. The extra defence spending in 2014 amounts to 16,545 million MZN (statistically significant, as evidenced in column (1) of Panel A of Table 2). This highlights the noteworthy influence of electoral cycles on the country's defence budget.

Following the outbreak of the conflict in Cabo Delgado, the estimations revealed an important shift. The coefficient for the interaction variable *'Trend x Post-2018'* is positive and statistically significant, standing at 3,186 million MZN in column (1). This demonstrates that, since 2018, the rate of annual defence expenditure has been rising by an additional 3,186 million MZN each year (or by an additional 0.58% per year as a share of total expenditures) (see also Figure 3).

The comparative analysis suggests the conflict outbreak has caused an estimated accumulated change in defence spending of approximately 43,604 million MZN up to 2022 (as indicated in Panel A of Table 2).

Table 2 Regressions for Defence Expenditures

	(1)	(2)	(3)	(4)
	OLS	ARIMA	OLS	ARIMA
	in million MZN	in million MZN	%	%
Panel A				
Dependent variable:	Defence (overall)		Share of Defence (overall) over Total Expenditures	
<i>Intercept</i>	3911**	4621***	3.02***	3.32***
<i>Year 2014</i>	16545***	15098***	6.73***	6.02***
<i>Trend</i>	687	569***	0.06	0.01
<i>Post-2018</i>	-19950***	-21511***	-3.46*	-4.36***
<i>Trend x Post-2018</i>	3186***	3407***	0.58**	0.71***
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	32.70***		9.32**	
Estimated accumulated change in spending:	43604		32451	
Panel B				
Dependent variable:	Armed Forces		Share of Armed Forces over Total Expenditures	
<i>Intercept</i>	1921	1900*	1.69***	1.69***
<i>Year 2014</i>	779	39	-0.01	-0.01
<i>Trend</i>	755	817***	0.17	0.17**
<i>Post-2018</i>	-15347**	-14698***	-2.27	-2.27**
<i>Trend x Post-2018</i>	2207**	2043***	0.31	0.31**
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	13.48***		6.72**	
Estimated accumulated change in spending:	22582		9298	
Panel C				
Dependent variable:	Defence Ministry		Share of Defence Ministry over Total Expenditures	
<i>Intercept</i>	420**	420	0.31***	0.29***
<i>Year 2014</i>	30	30	-0.04	-0.04***
<i>Trend</i>	27	27	-0.01	-0.01***
<i>Post-2018</i>	-252	-252	-0.09	-0.06***
<i>Trend x Post-2018</i>	27	27	0.01	0.00
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	2.35		1.62	
Estimated accumulated change in spending:	-36		-347	
Panel D				
Dependent variable:	Other Defence		Share of Other Defence over Total Expenditures	
<i>Intercept</i>	1569	1569	1.03*	1.03**
<i>Year 2014</i>	15735***	16271***	6.78***	6.78***
<i>Trend</i>	-95	249*	-0.10	-0.10
<i>Post-2018</i>	-4350	-2780	-1.10	-1.10
<i>Trend x Post-2018</i>	951	607	0.27	0.27*
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	1.38		0.91	
Estimated accumulated change in spending:	21057		23499	

Notes: Significance codes: *** p < 0.01, ** p < 0.05, * p < 0.10. The statistical estimations use data from 2012 to 2022. The Akaike information criterion (AIC) is used to select the autoregressive order (AR), the degree of differencing (I), and the moving average (MA) order of the autoregressive-moving-average (ARIMA) models.

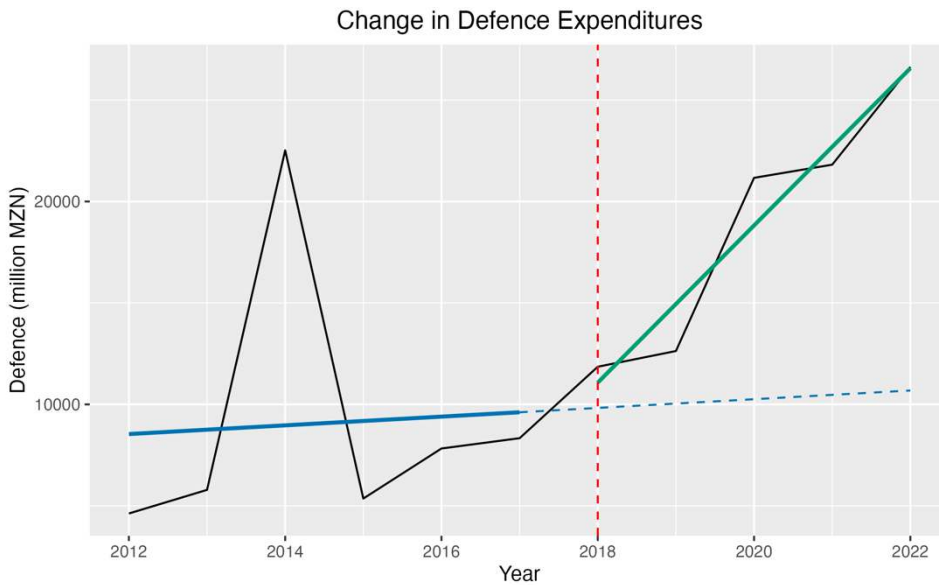


Figure 3 Overall Defence Expenditures from 2012 to 2022 (in million MZN)

If we conduct a sub-group analysis of defence expenditures, we find the largest increase in spending for the armed forces. Before 2018, there was only a small, statistically insignificant, upward trend in spending on the armed forces. However, expenditures grew substantially, particularly from 2020 onwards. The coefficient for ‘Trend x Post-2018’ in column (1) of Panel B of Table 2 is statistically significant at 2,207 million MZN. This indicates that the expenditures on the armed forces have been increasing by a faster rate since the year 2018, corresponding to an additional 0.31% per year as a share of total expenditures. It appears that the government may have reacted with some delay to the outbreak of the conflict, however, as the bulk of this increase can be mostly attributed to higher spending in the years from 2020 to 2022, as illustrated in Figure 4. Our comparative analysis suggests an estimated accumulated extra spending in the in armed forces of approximately 22,582 million MZN from 2018 to 2022 (see Panel B of Table 2).

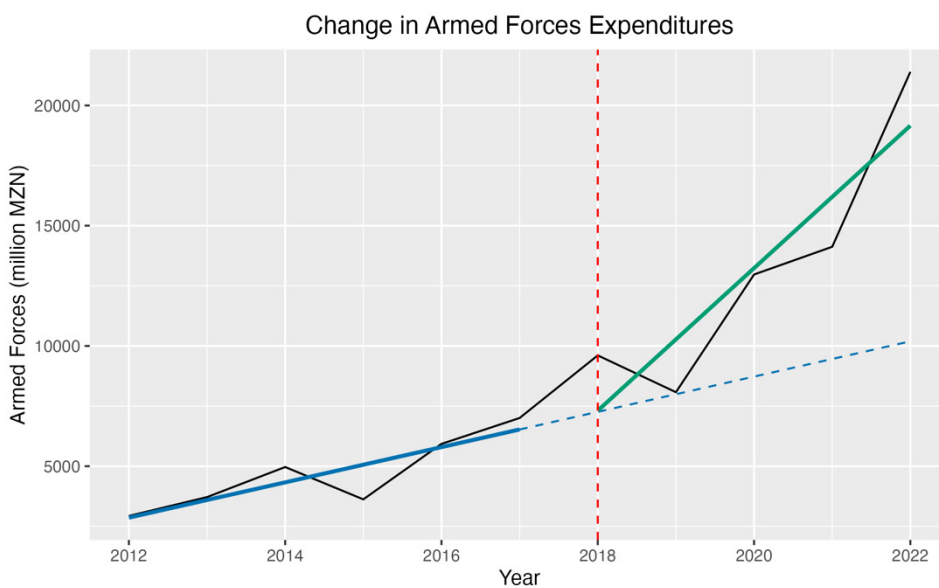


Figure 4 Armed Forces Expenditures from 2012 to 2022 (in million MZN)

In the case of expenditures on Mozambique’s Ministry of Defence, our regression analysis reveals mostly statistically insignificant changes due to the high variability in this budget item (see Panel C). The mixed financial response and the notably late surge in spending only in 2022 (as observed in Figure 5), may suggest a lack of a clear and consistent strategy or direction in allocating resources to the Defence Ministry.

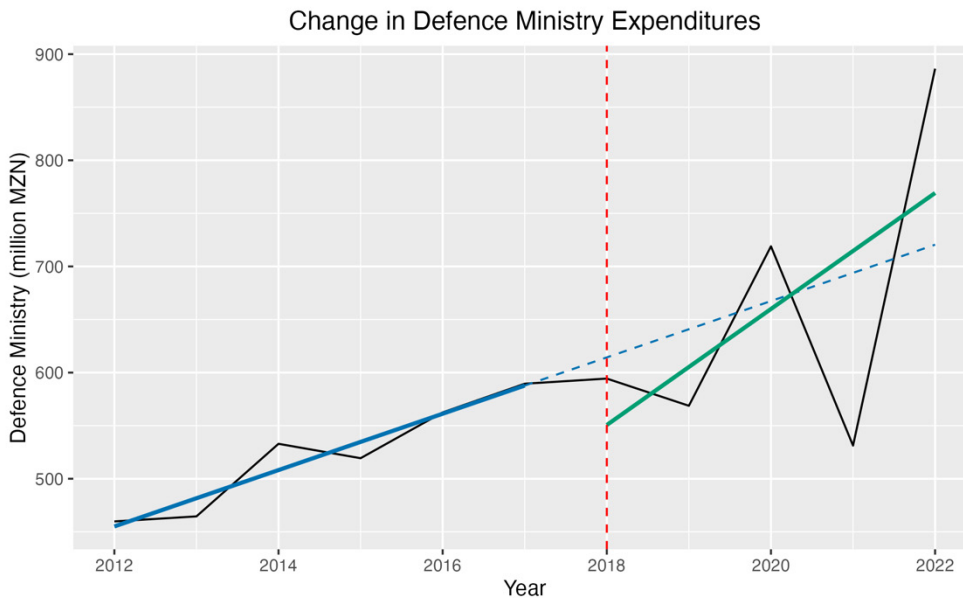


Figure 5 Defence Ministry Expenditures from 2012 to 2022 (in million MZN)

In the case of the remaining defence expenditures (e.g., *Instituto Superior de Estudos de Defesa, Hospital Militar de Maputo, Conselho Nacional de Defesa e Segurança, Casa Militar, Academia Militar Marechal Samora Machel*), mixed patterns are observed (see Figure 6). The year 2014, coinciding with the presidential election, saw a surge in the budget category “other defence expenditures” by 15,735 million MZN (refer to column (1) of Panel D of Table 2). After 2018, the picture is more nuanced. The estimated accumulated change in other defence expenditures since 2018 is approximately 21,057 million MZN. However, the interaction variable ‘*Trend x Post-2018*’ does not reach statistical significance. The variability in the data for this budget item limits the strength of any conclusions that can be drawn about the rate of other defence expenditures since 2018.

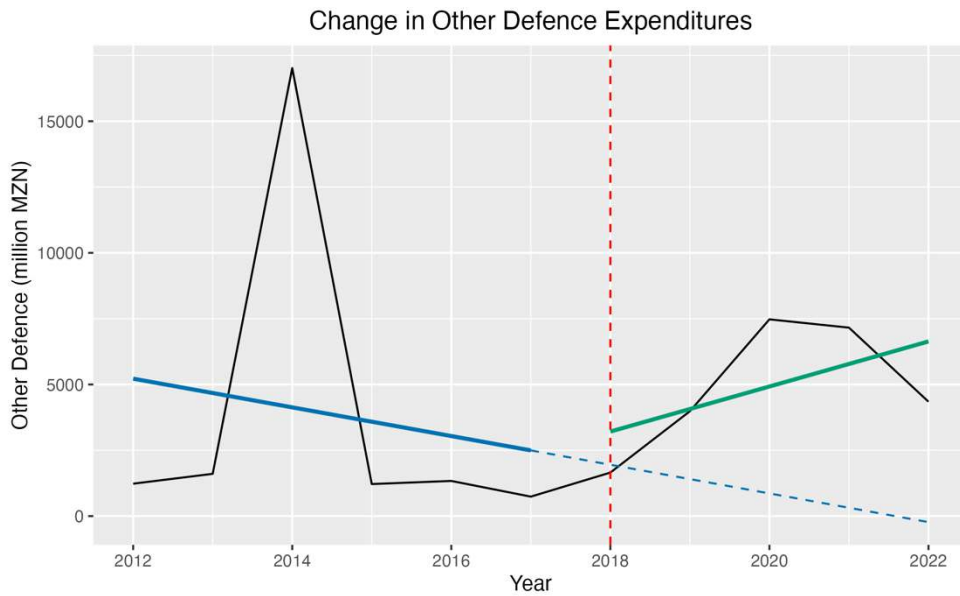


Figure 6 Other Defence Expenditures from 2012 to 2022 (in million MZN)

2.4 Structural Changes in Security and Public Order Expenditures

In this section, we try to reveal structural changes in security and public order expenditures. The regression analysis in Table 3 shows changes in fiscal trends in Mozambique’s security and public order sector before and after the conflict. Before 2018, our data show a statistically significant annual increase in spending of 2,030 million MZN. However, this upward trajectory became more pronounced after 2018. Annual expenditures in this sector have surged by an additional 4,772 million MZN (or 0.35% relative to the total budget) per year since 2018 (see Panel A of Table 3 and compare the increase in spending since 2018 illustrated in Figure 7). This accelerated post-conflict growth is noteworthy. The estimated cumulative change in security and public order expenditures following the insurgency is substantial, approximating 60,396 million MZN. This highlights the significant reallocations within the budget for security and public order since the outbreak of the conflict.

Table 3 Regressions for Security and Public Order Expenditures

	(1) OLS in million MZN	(2) ARIMA in million MZN	(3) OLS %	(4) ARIMA %
Panel A				
Dependent variable:	Security and Public Order (overall)		Share of Security and Public Order (overall) over Total Expenditures	
<i>Intercept</i>	8294***	8294***	6.58***	6.58***
<i>Year 2014</i>	2722	2722	-0.08	-0.08
<i>Trend</i>	2030***	2030***	0.35*	0.35***
<i>Post-2018</i>	-30872***	-30872***	-4.62*	-4.62***
<i>Trend x Post-2018</i>	4772***	4772***	0.65*	0.65***
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	105.0***		11.24***	
Estimated accumulated change in spending:	60396		23765	
Panel B				
Dependent variable:	Interior Ministry		Share of Interior Ministry over Total Expenditures	
<i>Intercept</i>	2874	.	2.47**	2.47***
<i>Year 2014</i>	756	1737	-0.19	-0.19
<i>Trend</i>	1127	1758***	0.27	0.27
<i>Post-2018</i>	4269	7143	2.54	2.54
<i>Trend x Post-2018</i>	-190	-821	-0.32	-0.32
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	1.42		0.65	
Estimated accumulated change in spending:	12807		-7464	
Panel C				
Dependent variable:	Police (PRM)		Share of Police (PRM) over Total Expenditures	
<i>Intercept</i>	409	.	0.31	.
<i>Year 2014</i>	85	224	-0.02	0.09
<i>Trend</i>	55	145	0.00	0.07
<i>Post-2018</i>	-22246**	-21837***	-4.96*	-4.65***
<i>Trend x Post-2018</i>	2923**	2834***	0.66*	0.59***
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	4.99*		4.71*	
Estimated accumulated change in spending:	20346		19124	
Panel D				
Dependent variable:	Other Security and Public Order		Share of Other Security and Public Order over Total Expenditures	
<i>Intercept</i>	5011**	5011***	3.80***	3.80***
<i>Year 2014</i>	1881	1881*	0.13	0.13
<i>Trend</i>	847**	847***	0.08	0.08
<i>Post-2018</i>	-12895**	-12895***	-2.21	-2.21**
<i>Trend x Post-2018</i>	2038**	2038***	0.32	0.32**
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	24.61***		3.84*	
Estimated accumulated change in spending:	27243		12106	

Notes: Significance codes: *** p < 0.01, ** p < 0.05, * p < 0.10. The statistical estimations use data from 2012 to 2022. The Akaike information criterion (AIC) is used to select the autoregressive order (AR), the degree of differencing (I), and the moving average (MA) order of the autoregressive-moving-average (ARIMA) models.

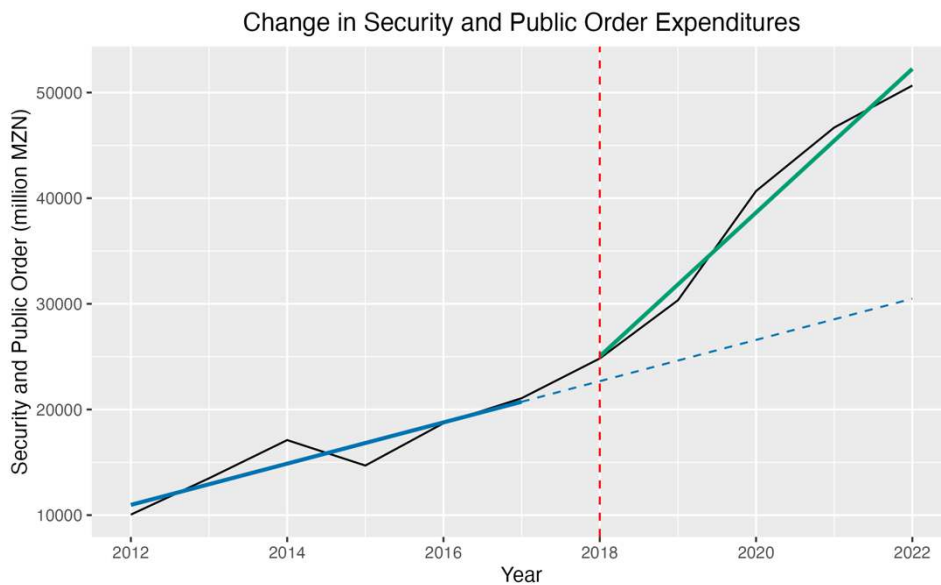


Figure 7 Security and Public Order Expenditures from 2012 to 2022 (in million MZN)

While overall security and public order expenditures increased significantly, the expenditures for the Interior Ministry do not exhibit statistical evidence for a strong shift in spending patterns before and after 2018 (as shown in Panel B of Table 3). Expenditures have already been increasing before the conflict and continued doing so after the conflict. The estimated cumulative change in spending since 2018 amounts to approximately 12,807 million MZN (compare also Figure 8).¹²

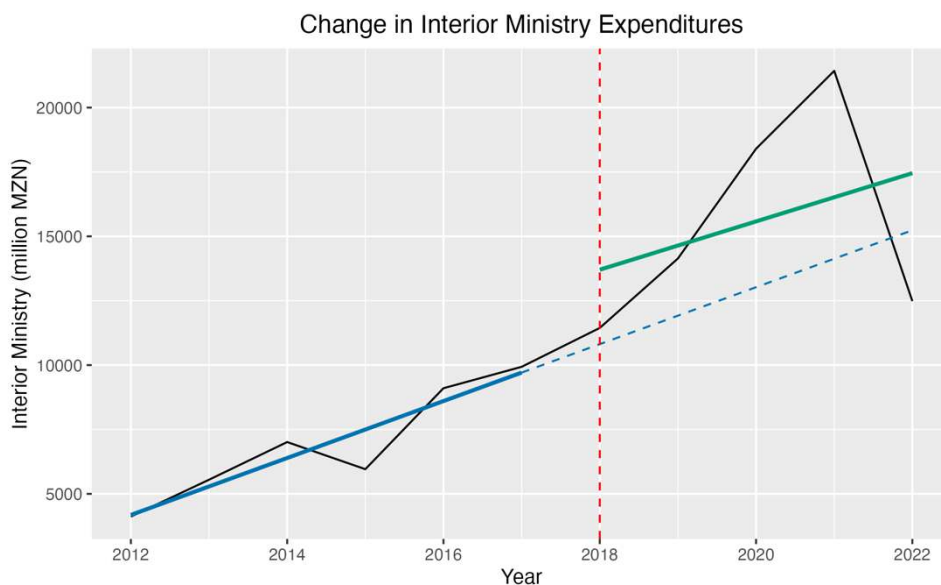


Figure 8 Interior Ministry Expenditures from 2012 to 2022 (in million MZN)

In the case of spending on the Mozambique Republic Police (PRM), there were no statistically significant trends in expenditures prior to the outbreak of the conflict (see Panel C of Table 3 and compare Figure 9). However, a notable increase in the rate of annual spending on the PRM has been observed starting in 2018. Specifically, the nominal annual spending on the PRM increased by an additional 2,923 million MZN per year

¹² Some caution is advised in interpreting these results, given the high variability in the Interior Ministry's expenditure data.

and by 0.66% as a share of total expenditures. These findings suggest that there has been a substantial change in the allocation of resources to the police following the insurgencies. The estimated accumulated change in spending due to this structural shift is considerable, amounting to 20,346 million MZN.

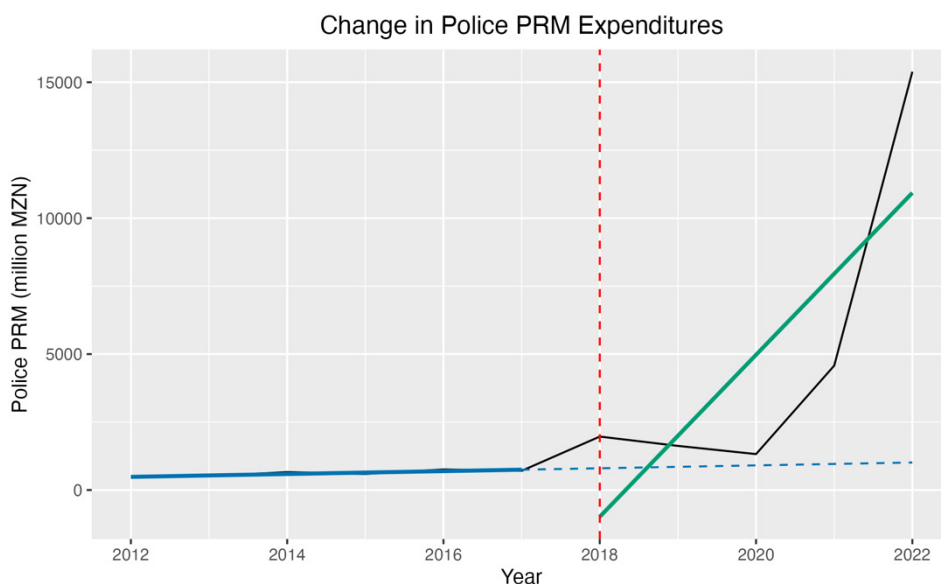


Figure 9 Police (PRM) Expenditures from 2012 to 2022 (in million MZN)

Figure 10 illustrates the structural change in expenditures for other security and public order expenditures before and after the pivotal year of 2018 (compare also Panel D of Table 3). Prior to 2018, there was a rising trajectory in spending, increasing annually by 847 million MZN. Since 2018, however, this trajectory has intensified. The regression results demonstrate that other security and public order expenditures have escalated, on average, by an extra 2,038 million MZN annually since the conflict. Consequently, the estimated cumulative change in expenditures attributable to these structural shifts is notably substantial, totaling approximately 27,243 million MZN in five years.

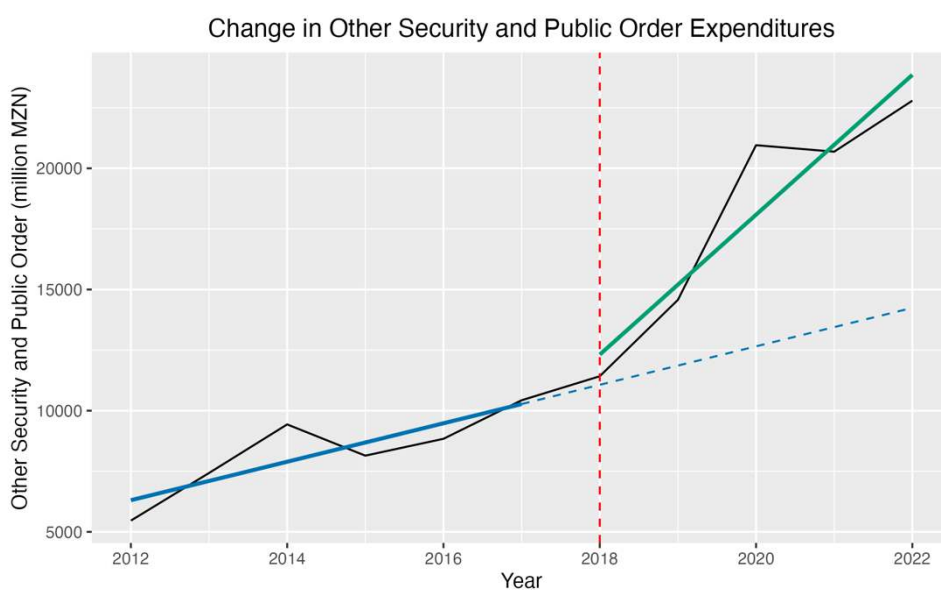


Figure 10 Other Security and Public Order Expenditures from 2012 to 2022 (in million MZN)

2.5 Insufficient Allocation of Intelligence Service on Cabo Delgado?

While other sectors related to the national security have seen substantial shifts in funding due to the outbreak of the conflict, expenditures on Mozambique’s Intelligence Service and State Security Agency (SISE) have followed a different trajectory (see Figure 11 and Table 4). Before the conflict, spending on intelligence service was already increasing by approximately 223 million MZN per year. After the conflict began, the growth rate of nominal intelligence expenditures increased only slightly and accumulated an estimated extra spending of 2,792 million MZN. Interestingly, the proportion of total expenditures allocated to intelligence services has remained largely consistent. Given the surge in terrorist attacks, one might have expected a more substantial increase in spending in this sector. The results suggest that the main drivers of spending on intelligence services are not solely related to the Cabo Delgado conflict but could be influenced by broader political interests and agendas.

Table 4 Regressions for Expenditures on Intelligence Services (SISE)

	(1) OLS in million MZN	(2) ARIMA in million MZN	(3) OLS %	(4) ARIMA %
Dependent variable:	Intelligence		Share of Intelligence over Total Expenditures	
<i>Intercept</i>	710**	710***	0.59***	0.53***
<i>Year 2014</i>	242	242	-0.01	0.07
<i>Trend</i>	223***	223***	0.04*	0.05***
<i>Post-2018</i>	-548	-548	0.19	0.35
<i>Trend x Post-2018</i>	123	123*	-0.03	-0.04
<i>F-statistic for joint hypothesis test: Post-2018 = 0, Trend x Post-2018 = 0</i>	21.15***		5.95**	
Estimated accumulated change in spending:	2792		-1109	

Notes: Significance codes: *** p < 0.01, ** p < 0.05, * p < 0.10. The statistical estimations use data from 2012 to 2022. The Akaike information criterion (AIC) is used to select the autoregressive order (AR), the degree of differencing (I), and the moving average (MA) order of the autoregressive-moving-average (ARIMA) models.

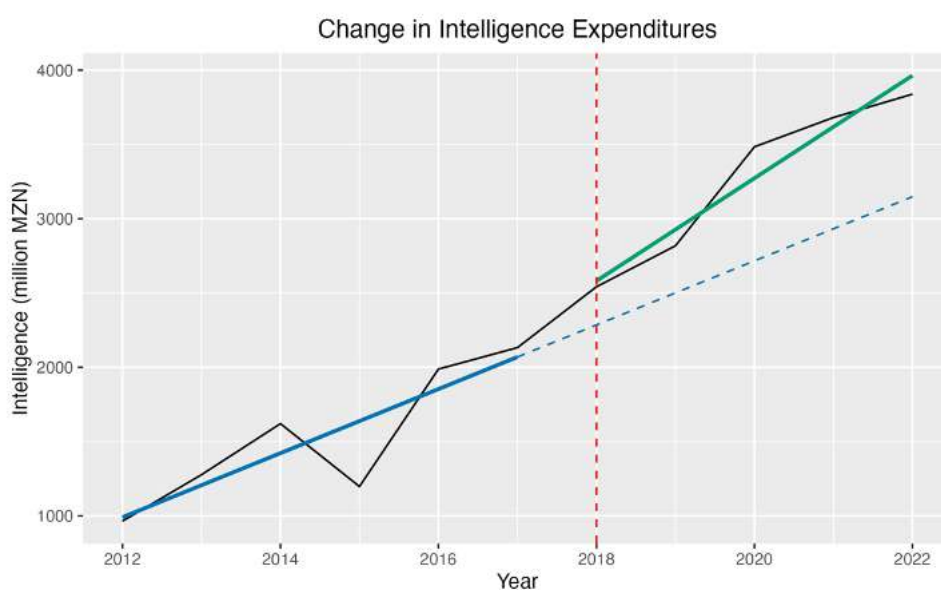


Figure 11 Expenditures on Intelligence Services and State Security (SISE) from 2012 to 2022 (in million MZN)

3. Change in Educational Spending Affecting the Most Vulnerable

3.1 Structural Changes in Education Expenditures

Before the onset of the conflict, education expenditures were on a steady upward trajectory, in nominal and relative terms. While a cursory glance at the nominal figures suggests that the war in Cabo Delgado has had minimal impact on education spending (see Figure 12 and Column (1) of Table 5), a more nuanced analysis reveals a different story.

Table 5 Regressions for Education Expenditures

	(1) OLS in million MZN	(2) ARIMA in million MZN	(3) OLS %	(4) ARIMA %
Dependent variable:	Education		Share of Education over Total Expenditures	
<i>Intercept</i>	21880***	21880***	17.13***	16.75***
<i>Year 2014</i>	1088	1088	-2.80**	-2.82***
<i>Trend</i>	4554***	4554***	0.60**	0.68***
<i>Post-2018</i>	-5596	-5596**	2.15	1.74***
<i>Trend x Post-2018</i>	623	623*	-0.73**	-0.72***
<i>F</i> -statistic for joint hypothesis test: <i>Post-2018 = 0, Trend x Post-2018 = 0</i>	246.93***		5.95**	
Estimated accumulated change in spending:	72		-80019	

Notes: Significance codes: *** p < 0.01, ** p < 0.05, * p < 0.10. The statistical estimations use data from 2012 to 2022. The Akaike information criterion (AIC) is used to select the autoregressive order (AR), the degree of differencing (I), and the moving average (MA) order of the autoregressive-moving-average (ARIMA) models.

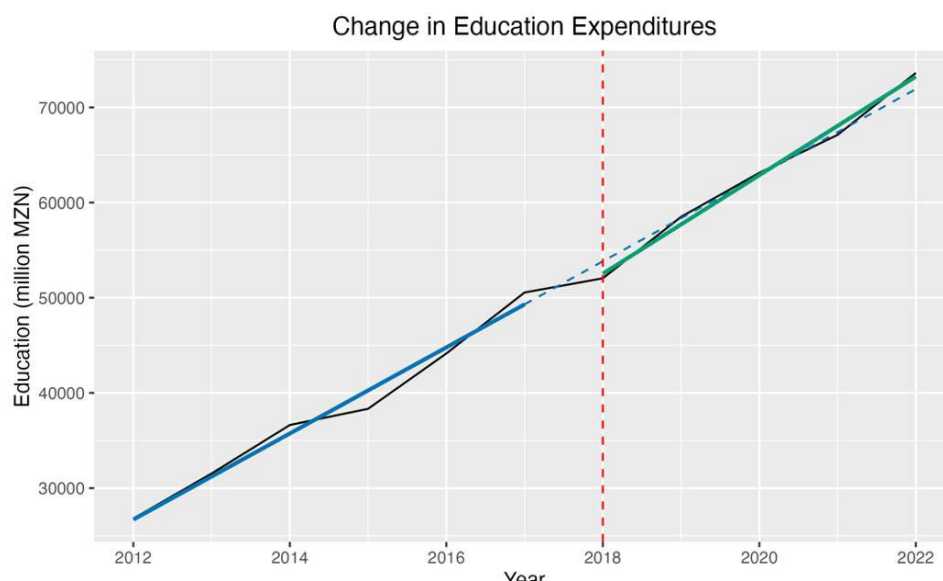


Figure 12 Expenditures Education from 2012 to 2022 (in million MZN)

Since the escalation of conflict, the proportion of funding allocated to education as a share of total spending has experienced a discernible relative decline (see Figure 13 and the significant, negative coefficients on the interaction term in column (3) of Table 5). Had the pre-2018 growth trend in the proportional budget allocation for education persisted through 2022, an additional 80 billion MZN would have been invested in education from 2018 to 2022. This emphasizes that, relative to previous years, investment in education has been on a diminishing trajectory.¹³

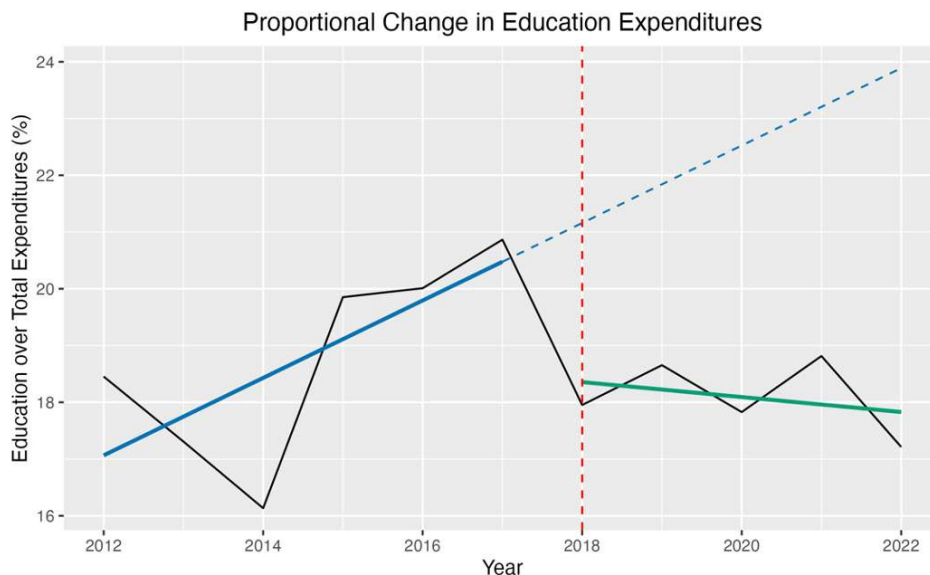


Figure 13 Education Expenditures from 2012 to 2022 (as share of total expenditures¹³)

This underinvestment in education becomes even more conspicuous when considering electoral politics. In the election year of 2014, the proportion of educational spending as a share of total spending was 2.8% below the projected spending, a deviation that is statistically significant (see kink in the year 2014 in Figure 13 and estimations in column (3) of Table 5).

3.2 Economic costs of the rise in illiteracy in Cabo Delgado

The erosion of educational opportunities due to the ongoing conflict in Cabo Delgado has far-reaching implications, casting a long shadow on the region’s future. With many schools closed or destroyed, thousands of children are deprived of their fundamental right to education. This not only compromises their prospects but also perpetuates cycles of poverty and marginalization. Notably, Cabo Delgado stands out as the only province in Mozambique to witness a decline in literacy rates since the conflict’s onset. Based on micro-census data from the National Institute of Statistics (2021; 2023a) there has been an 8.7% increase in illiteracy rates, soaring from 52.4% in 2020 to 61.1% in 2022. Specifically, illiteracy rates for males increased from 36.7% to 46.8%, while rates for females rose from 66.8% to 74.5%. Concurrently, employment rates in the province have declined by 6.6% from 79.9% in 2020 to 73.3% in 2022.

The deterioration in educational levels in Cabo Delgado carries not just social repercussions but also substantial economic costs. Kochav et al. (2015) estimate that the change in GDP per employee with respect to primary

¹³ A regression specification that uses the logarithm of education expenditures as the dependent variable corroborates a downward shift in relative educational spending. Specifically, the annual growth rate of nominal educational spending has been declining by approximately 3.9% each year since 2018.

education to be around 2.5% for low-income countries.¹⁴ Using this figure and the 2020 regional GDP of Cabo Delgado (42,254 million MZN), we approximate the impact on the economic output:¹⁵

$$\Delta GDP \approx GDP_{base} \times (\Delta education \times return\ on\ education) \times (1 + \Delta employment) \quad (2)$$

By this measure, the increasing illiteracy rates eventually result in a relative decline in Cabo Delgado's GDP of approximately 8,584 million MZN. Barro and Lee (2010) estimate the marginal return on schooling in Sub-Saharan Africa is even higher, at 6.6%.¹⁶ Using this rate of return on education for the Sub-Saharan Africa region, the expected output loss in Cabo Delgado amounts to roughly 22,661 million MZN. This alarming decline in opportunities and regional economic output emphasizes the urgent need for policy interventions to reverse the upward trend in illiteracy and to improve educational outcomes throughout the province.

4. Opportunity Costs of the Delay in the Mozambique LNG Project

Beyond the fiscal consequences discussed earlier, the conflict in Cabo Delgado has also levied a heavy toll on unrealized economic opportunities, primarily due to the suspension of gas production. TotalEnergies, a French oil and gas company, leads a consortium focusing on natural gas exploration off the coast of Cabo Delgado.¹⁷ The Mozambique LNG project in Area 1 of the Rovuma basin traces back to the discovery of abundant natural gas reserves in 2010, leading to a final investment decision of 20 billion USD in 2019. Yet, the venture was put on indefinite hold after an armed attack took place in the town of Palma in March 2021, resulting in the declaration of force majeure by the operator TotalEnergies.

In a Deutsche Welle interview, Patrick Pouyanné, CEO of TotalEnergies, detailed that any final decision to reinstate operations in Cabo Delgado, Mozambique, will undergo careful evaluation, with natural gas exploration costs being a major consideration.¹⁸ Pouyanné elaborated that the maintenance of projected costs and the renegotiation of contracts with local suppliers by TotalEnergies would also significantly influence the decision to restart operations. Additionally, he emphasized that security and human rights considerations will play crucial roles in the eventual decision to restart operations. Despite some improvements in regional security, TotalEnergies still remains cautious about moving forward with the suspended project.

In view of this, an article by Zitamar News (2023) is noteworthy, indicating TotalEnergies' intentions to initiate the construction of the LNG production facility by the end of 2023, as conveyed by Patrick Pouyanné on 27 September 2023, with projections hinting at the inception of gas production in 2028.¹⁹

Rystad Energy, an energy research company, anticipates that TotalEnergies might resume its Mozambique

14 Kochav, Y., Spivak A., Strawczynski M. (2017). "It's Human Capital Again: The Centrality of Higher Education in Explaining GDP per Employee", Open Journal of Economics and Finance. Accessed on 15 August at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2634006.

15 Regional GDP is taken from Instituto Nacional de Estatística (2023b). "Estimativas Provisórias do PIB Provincial para 2021". Accessed on 1 September 2023 at https://www.ine.gov.mz/web/guest/d/quadros_pib-provincial-2011-2021_-_provisorio-2021.

16 Barro R. and J.W. Lee., (2010). "A new data set of educational attainment in the world, 1950–2010". NBER Working Paper No. 15902, Cambridge, MA.

17 Total E&P Mozambique Area 1 Limitada, a wholly owned subsidiary of TotalEnergies, operates Mozambique LNG with a 26.5% participating interest alongside ENH Rovuma Área Um, S.A. (15%), Mitsui E&P Mozambique Area1 Limited (20%), ONGC Videsh Rovuma Limited (10%), Beas Rovuma Energy Mozambique Limited (10%), BPRL Ventures Mozambique B.V. (10%), and PTTEP Mozambique Area 1 Limited (8.5%).

18 DW África (2023a). "Total avisa: Custo do projeto em Moçambique não pode subir". Published on 13 February 2023. Accessed on 11 September 2023 at <https://www.dw.com/pt-002/totalenergies-avisa-que-custo-do-projeto-em-mo%C3%A7ambique-n%C3%A3o-pode-subir/a-64682702>.

19 Zitamar News (2023). "TotalEnergies looking to restart Mozambique LNG before year end". Published on 27 September 2023. Accessed on 28 September 2023 at <https://www.zitamar.com/totalenergies-restart-mozambique-lng-year-end/>.

LNG project in 2024 and forecasts the start of gas production in 2028.²⁰ This delay is attributed to necessary adjustments for anticipated cost increases due to global inflation surges, with Rystad Energy estimating a 25% hike in project costs, a figure consistent with rising LNG costs globally.

In an interview with DW África, environmental activist Daniel Ribeiro from the association Justiça Ambiental highlighted the financial dilemma of Mozambique, as delays in gas exploration projects result in significant revenue shortfalls. These funds are critically needed to manage a public debt crisis worsened by the hidden debts scandal. Complicating matters further, Mozambique is contractually obligated to bear the financial impact of any conflict-related disruptions, and any amendments to existing hydrocarbon laws require explicit approval from TotalEnergies and Eletricidade de Moçambique (EDM). This situation is especially risky for Mozambique considering that the government has utilized these gas contracts as leverage for obtaining international loans. The delay amplifies its urgent need for revenue to address its escalating sovereign debt.²¹

The Mozambique LNG project is the largest of the LNG initiatives in Mozambique. According to TotalEnergies, the The Mozambique LNG project has the capacity to scale up production to 43 million metric tons per annum (MTPA).²² In comparison, the Coral Sul gas project led by Eni and the Mamba project operated by Exxon Mobil in Area 4 have an estimated production capacity of about 3.4 MTPA and 15.2 MTPA, respectively.^{23, 24}

Given the multidimensional risks and the significant economic impact of the Mozambique LNG project, it is crucial to quantify the opportunity costs for Mozambique arising from production delays. Anticipated government revenues include:

1. Corporate income tax (*Imposto sobre o Rendimento das Pessoas Colectivas, IRPC*),
2. Production tax,
3. Share of profits from the LNG production,
4. Revenues from state participation of the national oil company of Mozambique (*Empresa Nacional de Hidrocarbonetos, ENH*),
5. Bonus payments upon reaching specific project milestones, such as the commencement of commercial production and achieving certain production targets.

The standard corporate income tax rate stands at 32% of net profits after allowable expenses are deducted. However, a reduced corporate income tax rate of 24% for the first eight years of production was agreed by the government and the oil and gas consortium.

After the costs of the consortium have been recovered, the profit is split between the contractor and the government. Profit-sharing between the government and the contractor is determined by a profit-sharing factor,

20 Club of Mozambique (2023). "TotalEnergies to restart Mozambique LNG project in 2024, first gas in 2028 – Rystad Energy". Published on 10 July 2023. Accessed on 11 September 2023 at <https://clubofmozambique.com/news/totalenergies-to-restart-mozambique-lng-project-in-2024-first-gas-in-2028-rystad-energy-240700/>.

21 DW África (2023b). "Projetos de gás deixaram Moçambique numa armadilha". Published on 13 July 2023. Accessed on 11 September 2023 at <https://www.dw.com/pt-002/projetos-de-g%C3%A1s-deixaram-mo%C3%A7ambique-numa-armadilha/a-66208487>.

22 TotalEnergies (2023). "About the Project". Accessed on 20 September 2023 at <https://mzlmg.totalenergies.co.mz/en/about-mozambique-liquefied-natural-gas-project>.

23 Eni (2023a). "Coral South: the gas field off the coast of Mozambique". Accessed on 20 September 2023 at <https://www.eni.com/en-IT/operations/mozambique-coral-south.html>.

24 Eni (2023b). "Rovuma LNG: we produce and process gas off the Mozambique coast". Accessed on September 2023 at <https://www.eni.com/en-IT/operations/mozambique-rovuma-lng.html>.

the R-factor. To put it simply, the R-factor is a ratio between the cumulative project revenues to the cumulative project costs. The R-factor for Area 1, which was agreed upon in the exploration and production concession contract (CCPP), is summarized in Table 6:²⁵

Table 6 Profit-sharing between the government and the consortium at the Mozambique LNG project (Area 1)

R-factor (Cumulative Project Revenues over Cumulative Project Costs)	Government's Share	Consortium's Share
0-1	10%	90%
1-2	20%	80%
2-3	30%	70%
3-4	50%	50%
Above 4	60%	40%

For instance, when the project's cumulative revenues are less than its cumulative costs (R-factor below 1), the government is entitled to 10% of the profit, leaving the consortium, led by TotalEnergies, with 90%. As the R-factor increases—indicating a rise in the project's profitability—the government's share also rises. When the R-factor is between 2 and 3, the government's take increases to 30% and the consortium's share diminishes to 70%. When the R-factor exceeds 4, the government's share jumps to 60% of the profit.

It is crucial to highlight that the bulk of the government profits is expected to materialize only in the later stages, after many years have elapsed. The Oxfam study led by Hubert (2019) offers key insights into the revenue dynamics of the relatively smaller Coral Sul project in Area 4, which is managed by ENI.²⁶ According to the baseline price scenario of the study, the R-factor never reaches 4. Remarkably, it only attains a value of 1 after 14 years of LNG production, increases to 2 after 18 years, and climbs to 3 following a lengthy 24 years. This delay in attaining higher R-factors signifies that government's anticipated profits are heavily “rear-loaded,” making them particularly vulnerable to macroeconomic variables, including interest rates, inflation, and global oil and gas price volatility.

CIP (2023c) highlights the disparities between the profit-sharing contracts negotiated between the Mozambican state and the oil and gas consortiums, and the provisions of Law No. 27/2014 of 23 September 2014.²⁷ Specifically, this law prescribes a 60% share of profit gas for the government under an R-factor of 2.5. Conversely, the Mozambique LNG project allocates only a 30% share to the government under the same R-factor. This implies that the projected government profit share at an R-factor of 2.5 is effectively halved compared to what is outlined in Law No. 27/2014.

This substantial discrepancy not only reveals the potential fiscal consequences of such arrangements but also raises important questions regarding the conformity of contracts with prevailing legal frameworks. Furthermore, the analysis by CIP (2023c) benchmarks this against governmental intakes from hydrocarbon initiatives in nations like Angola, Azerbaijan, and Tunisia. For instance, the government's share for an offshore venture in Tunisia retains at least 65% of profit-oil, ascending to 82.50% for R-factors exceeding 2.3. These comparisons raise questions about the equitable distribution of profits in the Mozambican gas ventures.

Comparing the Coral Sul project with the interrupted Mozambique LNG project, as depicted in Figure 14, reveals another risk layer. As illustrated, the increment in the government's profit share comes notably later in the Mozambique LNG project than in the Coral Sul project. This pattern suggests a riskier proposition for the government. While the Mozambique LNG R-factor arrangement could be favorable under a scenario of

25 Government of Mozambique (2006). “Contrato de Concessão para Pesquisa e Produção”. Accessed on 15 August 2023 at <https://www.inp.gov.mz/pt/Políticas-Regime-Legal/Contratos-de-Pesquisa-Producao-de-Hidrocarbonetos/Area-1-Bacia-do-Rovuma>.

26 Hubert D. (2019). “Government Revenues From Coral FLNG”. Oxfam. Published on 26 June 2020. Accessed on 1 August 2023 at https://websites.oxfamamerica.org/media/documents/Government_Revenues_From_Coral_Flng.pdf.

27 CIP (2023c). “The model adopted for gas production sharing at Rovuma is disadvantageous to the Mozambican state”. Accessed on 26 September 2023 at <https://www.cipmoz.org/wp-content/uploads/2023/05/THE-MODEL-ADOPTED-FOR-GAS-PRODUCTION-.pdf>.

sustained high gas prices and quick profits, it poses significant disadvantages. Specifically, the rear-ended structure of expected government revenues presents substantial risks in the face of elevated production costs, macroeconomic instabilities, government liquidity constraints, and unforeseen costs related to conflicts or operational interruptions.

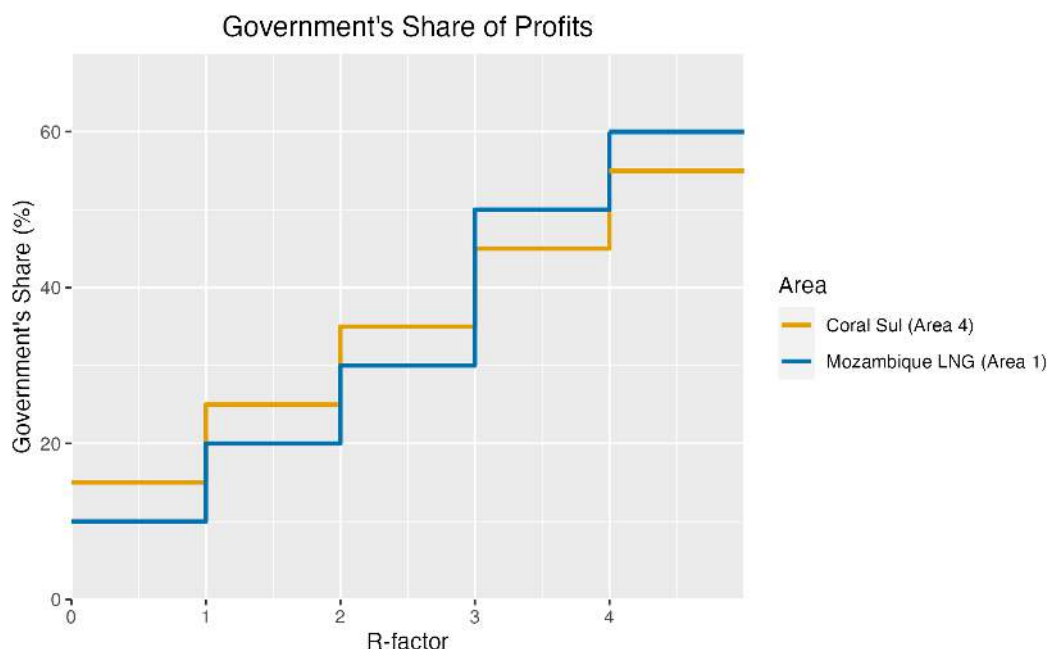


Figure 14 Government's share of profits depending on accumulated revenue to cost ratio

To estimate the opportunity costs associated with the delay in the gas project, we employ Hubert's (2019) model and assumptions as a guiding framework. Additionally, we consider Mozambique LNG's production capacity of up to 43 MTPA regarding revenues and costs, variations in the R-factor, and the three-tiered bonus payment structure specified in Article 12 of the CCPP contract. The first bonus of 5 million USD is disbursed at the onset of commercial production. A second bonus of 10 million USD becomes payable when the daily production averages 20,000 BOE (barrel of oil equivalent) for a continuous month. Subsequent bonuses of 20 million USD each are triggered whenever daily production increases by an additional 50,000 BOE for a given month. At a full capacity of 43 MTPA, the anticipated total volume of the bonus payments is 375 million USD.²⁸

To determine the present value of government revenues and to estimate the cost of the delay, we apply a weighted discount rate based on the government's interests on internal and external debts:

$$\text{Weighted discount rate} = \frac{i_{intern} \times d_{intern} + i_{extern} \times d_{extern}}{d_{intern} + d_{extern}} \quad (3)$$

Here, i represents the interest rate on internal and external debts, while d denotes the corresponding debt service amounts, which include both principal and interest payments. According to budget data from the Ministry of Economics and Finance (MEF), the total debt services for 2023 amounts to 54,167 million MZN for internal debts and 44,650 million MZN for external debts.²⁹ As of August 2023, the yield on a five-year government bond is 17% p.a., serving as our

28 To convert daily production figures from BOE (Barrel of Oil Equivalent) to MTPA (Million Tonnes Per Annum) of LNG, one may follow these steps. First, convert the daily BOE figure to cubic feet of natural gas. Second, translate this production into an annual figure. Finally, convert the annual cubic feet production into metric tons of LNG. Consequently, a daily production of 50,000 BOE would roughly equate to an annual production of about 2,249,484 metric tons or approximately 2.25 MTPA of LNG. Using these conversions, if the Mozambique LNG project reaches its full capacity of 43 MTPA, it would trigger 18 bonus payments of 20 million USD.

29 Ministério da Economia e Finanças (2023). "Plano Económico e Social e Orçamento do Estado para 2023". Accessed on 12 September 2023 at <https://www.mef.gov.mz/index.php/todas-publicacoes/instrumentos-de-gestao-economica-e-social/plano-economico-e-social-e-orcamento-do-estado-pesoe/pesoe-2023/1818-pesoe-2023/file>.

internal interest rate benchmark.³⁰ The 180-day-average Secured Overnight Financing Rate (SOFR) of 4.9% p.a. is used as the external interest benchmark.³¹ Utilizing these parameters in the weighted discount rate formula yields a calculated discount rate of 11.5% p.a.

By incorporating the calculated discount rate into the general framework established by Hubert (2019), we assess the financial impacts of project delays. Specifically, we determine the cost of delay as the difference between the Net Present Value (NPV) without delay and the NPV with delay:

$$\text{Cost of delay} = NPV_{no\ delay} - NPV_{with\ delay} \quad (4)$$

This equation allows us to quantify the erosion in present value attributable to the delay in project implementation. In Table 7, we present a range of estimated revenue losses for the government under different oil and gas price conditions. Consistent with the assumptions by Hubert (2019), the base price scenario is built on a Brent crude oil price of 70 USD per barrel (bbl), corresponding to an assumed LNG price of 7.7 USD per mmbtu (million British thermal units). For our high- and low-cost scenarios, Brent oil prices are set at 85 USD bbl and 55 USD bbl, respectively.

Table 7 Simulations of Government Revenue Loss Under Different Gas Price Scenarios (in million MZN)

LNG Price Scenario	3-Years-Delay	5-Years-Delay	10-Years-Delay
Base Price	228,090	343,517	542,443
High Price	383,385	577,401	911,766
Low Price	108,840	163,920	258,844

Table 7 illustrates the potential financial impact of delays in the Mozambique LNG project on government revenues. If the project were to resume operations in April 2024, it would correspond to a three-year delay of the project. Under the baseline price scenario, this delay would result in a reduction in government revenues of 228,090 million MZN. Recent World Bank data shows that the average Brent price was 86.20 USD, and the LNG price was 12.88 USD in August 2023³². This suggests that the current market landscape is characterized by high gas prices, further exacerbated by economic consequences of the Russo-Ukrainian conflict. In an environment of sustained and elevated gas prices, the estimated government revenue loss reaches approximately 383,385 million MZN within just three years. The table also highlights the fiscal risks associated with additional delays. A 10-year setback coupled with prolonged high commodity prices could result in a profound revenue shortfall of 911,766 million MZN.

5. Social Costs of the Conflict on Women

Aside from fiscal implications, the armed conflict accrues substantial and often overlooked social costs, particularly affecting vulnerable populations like women. A study by CIP (2021b) documents disturbing instances during the peak of civilian displacement in Cabo Delgado in 2020 where local leaders exploited displaced women, extracting sexual favors in exchange for food.³³ CIP (2023a) delves deeper into the dire circumstances faced by the displaced

30 Bolsa de Valores de Moçambique (BVM, 2023). “Tesouro-2023 -7ª Série.” Accessed on 10 September 2023 at <https://www.bvm.co.mz/index.php/pt/mercado/titulos-cotados/titulos-cotados#obriga%C3%A7%C3%B5es>.

31 Federal Reserve Bank of New York (2023). “SOFR Average and Index Data, 180-Day-Average.” Accessed on 10 September 2023 at <https://www.newyorkfed.org/markets/reference-rates/sofr-averages-and-index>.

32 World Bank (2023). “World Bank Commodities Price Data. 5-Sep-2023.” Accessed on 14 September 2023 at <https://thedocs.worldbank.org/en/doc/5d903e848db1d1b83e0ec8f744e55570-0350012021/related/CMO-Pink-Sheet-September-2023.pdf>.

33 CIP (2021b). “Número de deslocados internos em Moçambique cresceu em cerca de 2700% em dois anos?“. Accessed on 27 September 2023 at <https://cipmoz.org/wp-content/uploads/2020/10/Nu%CC%81mero-de-deslocados-em-Moc%CC%A7ambique-1-5.pdf>.

women and girls, many of whom are coerced into survival sex or exploited for necessities in the wake of the insurgent attacks. These harsh realities continue to prevail in several centers for internally displaced persons (IDPs), spotlighting a lesser-known facet of the conflict and pushing these individuals into high-risk situations, despite ongoing interventions. CIP (2023a) reveals alarming conditions, where displaced women and girls, primarily aged between 15 and 40, are compelled to engage in prostitution due to insufficient humanitarian aid and survival necessities. The situation is worsened by cuts in food assistance by organizations like the World Food Programme (WFP). This vulnerable population often experiences sexual exploitation and abuse at the hands of local leaders and center officials, with threats of eviction from accommodation centers serving as an additional layer of coercion. The lack of support programs, absence of protective measures, and inadequate reporting mechanisms have aggravated their dire circumstances, pushing them deeper into risk and exploitation.

OpenDemocracy (2023) also reported on the allegations of sexual exploitation in camps of IDPs in Cabo Delgado.³⁴ Local relief workers, appointed by community leaders, are accused of forcing vulnerable women to exchange sex for food aid. The report criticizes the Mozambican government for its inadequate management of aid distribution and for failing to hold the local leaders accountable, thereby exacerbating the humanitarian crisis. According to the article, the World Food Programme had acknowledged these reports of abuse but has not conducted any investigations, opting instead to refer victims to gender-based violence services. Additionally, OpenDemocracy (2023) brings to light instances of corruption amongst community leaders who are allegedly diverting aid for personal gain.

CIP (2021c) further highlights that displaced girls and young women who head households also frequently receive inappropriate assistance, mirroring the aid allocated to households led by adult males, despite their distinct needs. Specific cases reveal such families enduring homelessness due to a lack of support in erecting shelters, demonstrating the prevailing inadequacy of support programs to address the unique challenges faced by this vulnerable demographic.³⁵

Human Rights Watch (2021) has reported disturbing trends affecting women in northern Mozambique. The extremist group Al-Shabab has been accused of human rights abuses, complicating the situation for civilians, particularly women.³⁶ Hundreds of women and girls have been kidnapped by Al-Shabab in the Cabo Delgado region since 2018, with many remaining captive, forced into marriages or sold. Victims often face further trauma when Mozambican authorities detain them for extended periods post-rescue. The extremist group targets younger and healthier women, forcing them into marriages with their fighters and subjecting them to enslavement and sexual abuse. Some have been even sold for ransoms ranging from 40,000 MZN to 120,000 MZN. The Human Rights Group calls for adherence to humanitarian standards, legal accountability, and support for the affected women.

34 OpenDemocracy (2023). "Aid workers 'demand sex for food' in Mozambique's refugee camps". Accessed on 5 September 2023 at <https://www.opendemocracy.net/en/5050/mozambique-sex-food-aid-displaced-camps-world-food-programme/>.

35 CIP (2021c). "Gestão dos deslocados de guerra de Cabo Delgado: Governo falhou no apoio às vítimas do conflito". Accessed on 27 September 2023 at <https://www.cipmoz.org/wp-content/uploads/2021/04/Gesta%CC%83o-dos-deslocados-de-guerra-de-Cabo-Delgado-Governo-falhou-no-apoio-a-CC%80s-vi%CC%81timas-do-conflito.pdf>.

36 Human Rights Watch (2021). "Mozambique: Hundreds of Women, Girls Abducted". Accessed on 1 September 2023 at <https://www.hrw.org/news/2021/12/07/mozambique-hundreds-women-girls-abducted>.

6. Conclusion

This study provides a comprehensive analysis of the fiscal ramifications of the ongoing conflict in Cabo Delgado, Mozambique, revealing significant burdens on the national budget. To date, the conflict has led to additional expenditures on national security of about 106.8 billion MZN. The study further draws attention to the delayed Mozambique LNG project, a delay that leads to an estimated government revenue shortfall of 383.4 billion MZN under high gas prices.

Beyond the immediate fiscal strain, the crisis has far-reaching social and humanitarian implications. Our research indicates detrimental effects on education and human capital in Cabo Delgado, including a substantial loss in regional GDP due to surging illiteracy rates.

Despite substantial financial contributions and military aid from international partners, Mozambique's humanitarian needs remain largely unmet. Contributions from the European Union (EU) alone in the form of military and peacekeeping aid total approximately 8.5 billion MZN (125.9 million EUR)³⁷. However, as emphasized by the Center for Strategic & International Studies (CSIS), the overall funding remains insufficient³⁸. As of end-October 2023, Mozambique's Humanitarian Response Plan for 2023, which targets assistance for over 850,000 internally displaced persons (IDPs)³⁹, has secured only 178.7 million USD of its 512.9 million USD objective⁴⁰. This indicates that the funds mobilized through the coordinated response plan account for merely 32.7% of the total requirement. Furthermore, the allocated funding is not proportionally disbursed across different sectors. The deficit in funding is exceptionally acute in camp coordination and management, which has received just 4.9% of the funding it requires. This is followed by substantial funding shortfalls in education (12.6% funding coverage), protection (14.5% funding coverage), and food security and livelihood (28.1% funding coverage). This inadequacy in funding further weakens Mozambique's ability to manage the crisis effectively and safeguard vulnerable groups.

It is important to stress the interconnectedness of the fiscal, social, and governance dimensions of this crisis. The economic burdens created by the conflict directly contribute to social and governance challenges, resulting in a vicious cycle that exacerbates the entire situation. As the focus of international aid pivots increasingly toward military and peacebuilding interventions, there exists a risk for reduced budgets for other essential development initiatives. Such significant reallocations in aid allocation do not only contribute to the opportunity costs associated with the war but also create constraints that impede a comprehensive response to the multilayered needs of Mozambique's civil society. These shifts create consequences that are difficult to foresee, especially for future generations.

37 The EU support is allocated as follows: 20 million EUR for the Rwandan Defence Force, 89 million EUR for Mozambique's Armed Forces through the EU Training Mission, and 15 million EUR for the SADC mission. An additional 1.9 million EUR is set aside for peacebuilding initiatives. Confer European Council (2022). "European Peace Facility: Council adopts assistance measures in support of the armed forces of five countries". Accessed on 1 September 2023 at <https://www.consilium.europa.eu/en/press/press-releases/2022/12/01/european-peace-facility-council-adopts-assistance-measures-in-support-of-the-armed-forces-of-five-countries/>.

38 CSIS (2023). "Evaluating Mozambique's Security, Humanitarian, and Funding Landscape". Commentary by N.J. Larnerd and E. Columbo on 8 August 2023. Accessed on 15 September 2023 at <https://www.csis.org/analysis/evaluating-mozambiques-security-humanitarian-and-funding-landscape>.

39 IOM (2023). "Mozambique". Global Data Institute – Displacement Tracking Matrix. Accessed on 27 September 2023 at <https://dtm.iom.int/mozambique>.

40 An additional 53.3 million USD has been generated outside the coordinated response plan, but total funding still falls significantly short of the overall target of 512.9 million USD. For details regarding the coordinated plan, see United Nations Office for The Coordination of Humanitarian Affairs (2023). "Financial Tracking Service: Mozambique Humanitarian Response Plan 2023". Accessed on 24 October 2023 at <https://fts.unocha.org/countries/152/summary/2023>.

Lastly, the conflict's less tangible yet equally damaging effects should not be overlooked. The erosion of social structures, human rights violations, and compromised healthcare services amplify both immediate and long-term risks, such as disease outbreaks and mental health issues.

7. Recommendations

The economic, social, and political complexities of the Cabo Delgado conflict in Mozambique call for a nuanced, multi-dimensional policy approach. This section outlines recommendations for government bodies, international organizations, and multinational corporations in view of the research findings and most recent developments in Cabo Delgado.

Fiscal and Economic Measures

- 1. Avoid Further Delays in the Mozambique LNG Project:** To minimize the substantial loss of potential government revenue caused by delays, it is crucial to strengthen security measures and expedite the development of the Mozambique LNG project. Moreover, given the emerging competition from Tanzania in the Liquefied Natural Gas (LNG) market, there is an added sense of urgency for Mozambique to proceed promptly with its own gas projects.⁴¹
- 2. Transparent Budgeting:** It is imperative to ensure heightened transparency in the breakdown of expenditures related to the police, military, and security sectors, especially during electoral cycles. Such transparency is essential for fostering public trust and guaranteeing accountability in governance.
- 3. Financial Contributions from Multinational Corporations:** The government should proactively engage multinational corporations in the extractive sector to financially contribute to regional security measures. Given their vast potential future gains in the region, it is strategically beneficial for these corporations to invest in enhancing security and stability.

Governance and Trust Building

- 4. Participatory Solutions:** The government should engage local communities in the decision-making processes that pertain to security and development. Involving residents in these important conversations can instill a sense of ownership over local projects and initiatives. This participatory approach is likely to reduce grievances that could otherwise drive conflict, thereby fostering a more peaceful and collaborative environment.⁴²
- 5. Creating Trust in the Local Population:** To foster trust within local communities, the government should employ transparent governance practices, engage in meaningful community involvement, and hold public meetings and consultations. These actions will create an open dialogue and allow

41 CIP (2023b). "Para maximizar ganhos do gás, Moçambique deve avançar urgentemente". Accessed on 1 September 2023 at <https://www.cipmoz.org/wp-content/uploads/2023/06/Para-maximizar-ganhos-do-gas.pdf>.

42 See for instance the work of Lind et al. (2023), which explores the use of innovative participatory methods in Kenya and Madagascar. Their research employs tools like participatory video to enhance engagement and build trust within marginalized local communities affected by large-scale resource development initiatives. Confer Lind, J., Huff A., Shaw J., De Jong W. (2023). "Seeing' Conflict at the Margins in Kenya and Madagascar". Accessed on 15 September at <https://www.ids.ac.uk/projects/seeing-conflict/>.

for greater accountability, thereby building a more trusting relationship between authorities and community members.

- 6. Avoid Misconduct and Abuse of Power:** To curb human rights abuses and corruption within military, police, and security forces, it is imperative to implement robust oversight mechanisms. These mechanisms should include regular audits, transparent reporting, and independent evaluations to ensure that these forces are operating within the bounds of the law and upholding ethical standards.

Social Measures

- 7. Increase Educational Spending:** It is essential to prioritize investments in education and social sectors as a proactive approach to mitigating future conflicts. At the same time, it is crucial to avoid implementing short-sighted austerity measures that could compromise long-term stability.
- 8. Humanitarian Budget:** It is imperative to allocate additional funds specifically for humanitarian aid, while also ensuring that these resources are used effectively to address the immediate needs of populations affected by conflict.

Resource Management

- 9. Resource Curse Mitigation:** It is essential to actively engage local communities and conduct awareness campaigns that focus on the importance of diversified economic activities. Beyond relying on primary resources, economic opportunities for long-term sustainability should be explored. Additionally, reinvesting in education for sustainable development across multiple generations is a key strategy for fostering long-lasting economic stability and growth.
- 10. Emphasis on the Production Tax:** In consideration of complex corporate income tax collection and tax avoidance strategies by multinational companies, focus on royalties like the production tax can be a more predictable and immediate revenue source. Consequently, it should be guaranteed that the communities receive their fair share of the production tax.⁴³

In summary, the multi-dimensional challenges posed by the conflict in Cabo Delgado demand urgent, comprehensive, and nuanced solutions across fiscal, social, and governance spheres. By acting on these recommendations promptly, stakeholders can mitigate both immediate suffering and long-term socio-economic repercussions, paving the way for a more stable and prosperous future for the region.

⁴³ See further discussion on the advantage of royalties in Readhead, A., Tarus, V., Lassourd, T., Madzivyanyika, E., Schlenker, B. (2023). "The future of resource taxation: 10 policy ideas to mobilize mining revenues. International Institute for Sustainable Development & African Tax Administration Forum." Accessed on 1 September at <https://www.iisd.org/publications/guide/future-of-resource-taxation>.

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