COVID-19 Pandemic and Earnings Management: Evidence from Non-Financial Firms in Tanzania and Kenya.

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Abstract

This paper examines the impact of COVID-19 on accrual-based earnings management (AEM) in Kenya and Tanzania, two countries with similar economies but different pandemic responses. Using a panel data regression model on 43 non-financial firms listed on the Nairobi and Dar-es-Salaam Stock Exchanges, covering 344 firm-year observations, the study analyzed the relationship between a COVID-19 dummy variable and absolute discretionary accruals (Abs_[DAC]). The 2017-2019 period is defined as "pre-pandemic" and 2020-2022 as "pandemic." The results show an insignificant positive relationship between COVID-19 and Abs_[DAC] across the sample, indicating no statistically significant impact on AEM for both Kenyan and Tanzanian firms. However, a significant negative relationship was found for Kenyan firms, suggesting a reduction in AEM, likely due to stringent lockdowns and economic uncertainty. These findings provide insights for investors and policymakers on how pandemic-response policies influence financial reporting. Future research could explore alternative earnings management measures and account for differences in economic conditions and regulations.

1. Introduction

The COVID-19 pandemic is widely regarded as the most global health and socio-economic crisis (Lassoued and Khanchel 2021; Naseer, Khalid et al. 2023). Emerging in late 2019, the pandemic has had profound and widespread effects on economies and essential life-support systems worldwide (Ezra, Kitheka et al. 2021). Beyond the tragic loss of human life, the COVID-19 pandemic significantly disrupted economic activities, leading to a sharp contraction in the global economy due to a reduced production, decreased employment, and diminished economic output. The global crisis survey report in 2021 revealed that approximately 70% of businesses worldwide experienced revenue losses, supply chain disruptions, and increased operational costs (Ali, Amin et al. 2022, Ozili and Arun 2023). However, the impacts of the COVID-19 pandemic have been uneven across countries and regions. Low-income and emerging economies have been particularly vulnerable, suffering greater consequences due to weak healthcare systems, inadequate preparedness and limited financial resources (Kassegn and Endris 2021, da Silva Flores, Sampaio et al. 2023).

East African region, like many other emerging economies, was not spared from the adverse effects of the COVID-19 outbreak. Critical economic sectors, including agriculture, tourism, hospitality and entertainment, experienced a significant slowdown due to travel restrictions, border closures, quarantine measures, and flight cancellations. These restrictions severely limited international, intra-regional and domestic trade, leading to a 6% decline in total trade from US$55,278.2 million in 2019 to US$51,915 million in 2020. Moreover, total investment dropped by 46% in 2020 (Mold and Mveyange 2020). The pandemic's impact was widespread, affecting businesses across sectors and sizes, leading to substantial declines in firms' sales revenues and overall financial performance. In such challenging scenarios, managers may be tempted to engage in earnings management to mitigate the negative effects on financial performance and to create a perception of stability.

Earnings management (EM) refers to a range of accounting choices that can influence financial reporting results, aiming to either deceive stakeholders in their decision-making or affect contractual outcomes tied to reported accounting information (Healy and Wahlen 1999). There are two widely recognized forms of earnings management: accrual-based EM (AEM), which involves making accounting choices such as changing the accounting policy or estimates and real EM (REM) which involves manipulating actual business activities, such as temporarily increasing sales volume by offering price discounts (Roychowdhury 2006). This study focuses only on AEM as it was particularly susceptible to changes during the COVID-19 pandemic. While auditors and regulators can typically constrain AEM, audit activities were significantly affected by social distancing strategies, such as work-from-home policies, during the pandemic (Albitar, Gerged et al. 2020).

Empirical evidence suggests that earnings management intensify during periods of turbulence, crises or recessions (Jordan, Clark et al. 2021). For instance, studies have documented increased EM practices during oil crises (Bugshan, Lafferty et al. 2020, Kjærland, Kosberg et al. 2021, Bugshan, Alnahdi et al. 2022), economic crises (Silva, Weffort et al. 2014) and financial crises (Kumar and Vij 2017, Ntokozi, Tzovas et al. 2022). These studies indicate that during times of economic crises, managers may feel heightened pressure to mitigate the adverse effects of the crises to meet investor and stakeholder expectations. Additionally, different crises may have varying effects on EM behaviours, influenced by factors such as the nature of the crisis itself

(Lassoued and Khanchel 2021) or the variability in reporting culture, institutional settings or economic development (Kjærland, Kosberg et al. 2021).

To date, several studies have examined EM practices during the COVID-19 pandemic globally, though the findings have been somewhat contradicting. For instance, Lassoued and Khanchel (2021), Yaşar and Yalçın (2024) and da Silva Flores, Sampaio et al. (2023), found that European firms are inclined to engage more in EM practices during the COVID-19 pandemic in comparison to the periods preceding it. Xiao and Xi (2021) also found that the Chinese firms in the most impacted region opted for more accrual-based EM than real EM. Liu and Sun (2022)) studied American firms, and Hariadi and Kristanto (2022) investigated Indonesian firms. They all concluded that EM practices increased amid the COVID-19 outbreak. However, (Ali, Amin et al. 2022, Pjaaka and Brannan 2022) observed a decrease in EM practices amid the COVID-19 pandemic among G-12 countries and European real estate firms respectively. Suggesting that investors are more tolerant of losses in challenging times; hence, EM would be fruitless.

Given the relatively inconclusive and limited results, there is a need for more empirical evidence on firms' EM behaviour during the COVID-19 pandemic, especially from the emerging market viewpoint, as most studies have focused on developed market (Koutoupis, Kyriakogkonas et al. 2021), makes generalization of the findings challenging. Therefore, this study compares AEM practices before the pandemic (2017-2019) and during the pandemic (2020-2022) between Kenya and Tanzania, two developing countries in East Africa that took quite different approaches to managing the pandemic. Specifically, the study aims to answer the following questions: 1) How did the COVID-19 pandemic affect EM practices among non-financial firms in Tanzania and Kenya? 2) Did the contrasting COVID-19 management strategies in Tanzania and Kenya lead to significant differences in EM practices between the two countries?

2. Review of Related Literature

Research results from across the globe have suggested that managers tend to manipulate earnings either upwards or downwards during pandemics. For instance, Lassoued and Khanchel (2021) analysed a comprehensive sample of 2,031 European firms revealing that European companies were inclined to engage more in EM practices during the COVID-19 pandemic in comparison to the periods preceding it. Similarly, da Silva Flores, Sampaio et al. (2023) observed significant fluctuations in discretionary accruals among Brazilian firms during the COVID-19 outbreak, indicating a stronger motivation for earnings manipulation. Likewise, Filip and Raffournier (2014) also found that the economic challenges resulting from the COVID-19 pandemic compelled Croatian firms to resort to EM to boost income, aiming to fulfil their targeted dividend goals. Xiao and Xi (2021) also found that the Chinese firms in the most impacted region opted for more accrual-based EM than real EM. Additionally, studies by Liu and Sun (2022)) in the USA and Hariadi and Kristanto (2022) in Indonesia concluded that EM practices increased during the COVID-19 outbreak. These findings align with earlier studies indicating that managers tend to intensify their EM practices during crises to mitigate the adverse impacts of the crisis on various aspects of performance, such as operating losses, managing earnings volatility, avoiding violations of debt covenants, and preventing declines in stock prices and the overall image of the firm (Ozili and Arun 2023).

An alternate perspective in the literature argues for reduced EM practices in crisis periods. This view suggests that investors are more tolerant of losses in challenging times; hence, EM would be effective (Türegün 2020). Moreover, during periods of economic or financial recessions,

companies often face increased scrutiny, leading to a higher demand for more quality earnings (Francis, Hasan et al. 2013). This viewpoint is supported by the findings of (Ali, Amin et al. 2022, Pjaaka and Brannan 2022), among others, who also observed a decrease in firms' involvement in EM amid the COVID-19 pandemic. given the conflicting findings in prior research and limited empirical evidence on EM practices during the pandemic in emerging economies like Tanzania and Kenya, this study seeks to address these gaps.

The current study is grounded on three theories: agency theory, signaling theory and institutional theory. According to agency theory, amanager's opportunistic behaviours can be attributed to the inherent conflicts that arise when the interests of the shareholders and managers are not perfectly aligned (Jensen and Meckling 1976). This behaviour may be prevalent during the pandemic as the pandemic creates uncertainty that might push managers to engage in EM practices (Liu and Sun, 2022). Thus, agency theory provides a logical basis for examining whether managers engage more (or less) in AEM practices during the pandemic compared to pre-pandemic period.

Signaling theory explains how firms communicate information about their financial performance and prospects to external stakeholders, such as investors, creditors, and regulators (Spence 1978). The core idea of signalling theory is that firms use various signals or cues to convey private information that may not be fully transparent to outsiders. These signals are designed to influence the perceptions and decisions of external stakeholders. During the pandemic, managers may have more incentive to smooth earnings upwards to enhance their reported performance and maintain good relationships with stakeholders.

Lastly, the institutional theory suggests that manager's motivations and behaviours are influenced by the values and norms considered acceptable in a particular institutional setting (Seal 2006). Therefore, we expect that the manager's opportunistic behaviours during the COVID-19 pandemic will vary depending on the institutional context. Drawing on these three theories, this study formulated the following hypotheses;

Hypothesis 1: The level of AEM among non-financial firms in Tanzania and Kenya increased (decreased) significantly during the COVID-19 pandemic compared to the pre-pandemic period.

Hypothesis 2: The level of AEM among non-financial firms in Tanzania differed significantly from that of Kenya during the pandemic, reflecting the contrasting COVID-19 management strategy in each country.

3. Methodology

Examining AEM practices in emerging economies, particularly Kenya and Tanzania, can offer a unique perspective compared to studies focused on developed nations. Both countries are in East Africa, experience similar economic climates, and face comparable developmental challenges. This makes for a more controlled comparison when isolating the variable of COVID-19's impact. However, Kenya implemented lockdowns and testing regimes, while Tanzania adopted a more open approach. This contrast could reveal how different policy responses indirectly influenced corporate behaviour and financial reporting.

The study sample was drawn from non-financial companies listed on the security exchanges in Tanzania and Kenya. The financial institutions were excluded due to regulatory inconsistencies and specialized accounting practices. Following (Brannan, Pjaaka et al. 2023), we used yearly data as most firms do not publish interim financial reports. The study period was divided into two phases: being the pre-pandemic period (2017 to 2019) and the pandemic period (2020 to 2022). The first confirmed case of COVID-19 was on March 13, 2020, hence marking the year 2020 as the starting point for the pandemic period in the region. The final data set consisted of consolidated annual financial data hand-collected from the respective stock exchanges (Nairobi Securities Exchange for Kenya, Dar es Salaam Stock Exchange for Tanzania). After excluding firms with incomplete data for the study period, we retain 43 firms, resulting in a balanced panel dataset of 344 firm-year observations.

COVID-19 was treated as the independent variable, representing a dummy variable with the value one (1) during the COVID-19 pandemic and zero (0) otherwise (Ali, Amin et al. 2022). To assess variations in AEM practices (the dependent variable) during COVID-19 pandemic periods, we measured AEM was measured using discretionary accruals, calculated using the modified Jones model (1991) by (Dechow, Sloan et al. 1995). The process began with estimating total accruals (TACC) using the following formula;

$$TACC_{it} = EARNINGS_{it} - CFO_{it} \qquad (1)$$

Where:

$TACC_{it}$ is the total accruals for firm *i* in year *t*

$EARNINGS_{it}$ is the profit after tax

CFO_{it} is the Net Cash flows from operating activities

We then determine the regression coefficients (β) by estimating the industry-year regression model as:

$$\frac{TACC_{it}}{TA_{it-1}} = \beta_0\left(\frac{1}{TA_{it-1}}\right) + \beta_1\left(\frac{\Delta Rev_{it}}{TA_{it-1}}\right) + \beta_2\left(\frac{PPE}{TA_{it-1}}\right) + \varepsilon_{it} \qquad (2)$$

Where:

$TACC_{it}$ is the total accruals for the year (t) as derived in equation (2)

$TA_{i,t-1}$ is the lagged total assets

ΔREV_{it} is the change in revenues;

PPE is the gross value of Property, Plant and Equipment

To control for the effects of heteroscedasticity, all variables were standardized by scaling them with lagged total assets (t-1). This adjustment helps ensure a more uniform distribution and mitigate potential issues arising from unequal variances across the data. The predicted regression coefficients $(\hat{\beta})$ were applied to estimate sample's non-discretionary accruals (NDAC), using Ordinary Least Squares (OLS) estimation as:

$$NDAC_{it} = \hat{\beta}_0\left(\frac{1}{TA_{it-1}}\right) + \hat{\beta}_1\left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it-1}}\right) + \hat{\beta}_2\left(\frac{PPE}{TA_{it-1}}\right) \qquad (3)$$

The adjustment of change in revenue ΔREV_{it} by the change in accounts receivables ΔREC_{it} is due the possibility that the company might have boosted sales by adjusting credit terms (González and García-Meca 2014). Finally, discretionary accruals (DAC) are estimated as follows:

$$DAC_{it} = \left(\frac{TACC_{it}}{TA_{it-1}}\right) - NDAC_{it} \qquad (4)$$

The assessment of discretionary accruals (DAC) is conducted in absolute values $\left[Abs\left(DAC_{it}\right)\right]$. This approach considers both earnings increases and decreases, effectively capturing accrual reversals stemming from EM, as highlighted by Braam, Nandy et al. (2015).

We also controlled for common firms characteristics that might condition a firm's EM behaviour. These are firm size (SIZE), firm age (AGE), Leverage (LEV), Profitability (ROA) and audit quality. Firm size is considered because a large firm's information is publicly available and can be obtained at a low cost compared to small firms. Therefore, large companies may have more incentives to practice EM during the pandemic, driven by the need to outperform analysts' predictions (Kalbuana, Prasetyo et al. 2021). Firm age (AGE) was included because older, more mature firms are expected to be less affected by the pandemic given their more developed internal controls and resources to deliberately monitor firms' activities (Haneberg 2021). A firm's leverage level (LEV) is considered because loan convention provisions are usually hypothesized to be the important determinants of managers' accounting policy choices (Kalbuana, Prasetyo et al. 2021). The firm's profitability, measured by Return on Assets (ROA), was incorporated due to substantial evidence suggesting that managers might strategically manipulate accruals to mask underwhelming performance or defer a portion of exceptionally positive current earnings to subsequent years (Purnama and Nurdiniah 2019). Audit Quality (BIG_4), measured by the size of the Audit firm, is usually taken as a representation of the auditors' reputation and, hence the value of the reported earnings (Eilifsen and Knivsflå 2016).

To control for unobserved firm-specific factors that might influence AEM, we use a panel data regression model;

$$AEM_{it} = \beta_0 + \beta_1\left(COVID\_19_t\right) + \beta_2\left(AGE_{it}\right) + \beta_3\left(SIZE_{it}\right) + \beta_4\left(ROA_{it}\right) + \beta_5\left(LEV_{it}\right) + \beta_6\left(GIB\_4_{it}\right) + \varepsilon_{it}$$

Where:
AEM_{it}=Accrual-based earnings management
Subscript = firm *i* in year *t*.
β_0=is constant;

β_1 is the dummy variable for the pandemic period. The coefficient β1 will indicate the change in AEM associated with the pandemic period, controlling for other factors.
β_{1-6} are the regression coefficients to be estimated
The other variables are defined in Table 1.

Table 1: Definition of the variables.

Variable	Definition
Dependent	
Abs_DAC	is the absolute value of discretionary accruals, a measure of AEM, calculated using the modified Jones model (1991)

Independent variables	
COVID_19	a dummy variable representing the pandemic [1 if the observation is from the pandemic period [2020-2022] and 0 pre-pandemic [2017-2019]
Control variables	**Firm specific charcteristics**
Firm size [SIZE]	is the natural log (ln) of total assets
Firm age [AGE]	Number of years since foundation
Firm profitability [RO]	is the return on assets
Firm leverage level [LEV]	is the total liabilities divided by total assets
Quality of firm's auditors [BIG-4]	is equal to 1 if audited by the big four (4) auditors; Deloitte, PricewaterhouseCoopers (PwC), Ernst & Young (EY) or KPMG and zero (0) otherwise

4. Results and Discussion

To gain an initial understanding of any changes in AEM practices between the two periods, we first compare the descriptive statistics (mean, median, standard deviation) of the study variables for firms in both countries, separately for the pre-pandemic and pandemic periods. The results in Table 2 show the total of 344 observations, with 215 from the pre-pandemic period and 129 from the pandemic period, with Kenya having more observations in both periods. The potential reason for the difference in observations is that Kenya has a more developed capital market with more listed companies compared to Tanzania, which would naturally lead to more observations in the study. However, the larger representation of Kenyan firms might be driving the study results.

The statistics for the pooled sample (Table 2) also indicated a slight shift in the observed mean absolute discretionary accruals (Abs_DAC), from -0.9 per cent to 0.5 for pre-pandemic and pandemic periods, respectively. The maximum and minimum Abs_DAC values remained consistent for both periods, suggesting that the pandemic had no impact on AEM practices for non-financial listed firms in Kenya and Tanzania. Our findings are contrary to (Waweru and Prot 2018), who reported an average absolute DA of 11.3 per cent for the annual periods from the year 2005 to 2014, before the pandemic and the new code of corporate governance practices (CMA 2015) that was expected to enhance compliance and thus limiting firm's AEM practices in both countries.

The results for other control variables revealed almost similar trends for both periods. This suggests that the sample encompasses firms of relatively similar sizes and nature.

Table 2: Descriptive Statistics:

Panel A: Pooled Sample										
	Pre-pandemic (2017–2019)					**Pandemic period (2020–2022)**				
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Abs_DAC	215	-.009	.135	-.25	.201	129	.005	.096	-.25	.201
AGE	215	61.22	29.962	20	112	129	64.256	29.879	20	112
SIZE	215	18.046	2.905	6.963	29.565	129	18.019	2.09	11.06	22.06
LEV	215	.522	.302	.177	1.198	129	.575	.336	.177	1.198
RAO	215	.025	.108	-.205	.18	129	.002	.112	-.205	.18
BIG_4	215	.753	.432	0	1	129	.698	.461	0	1
Panel B: Country-wise- Pandemic sample Country										
	KENYA					**TANZANIA**				
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Abs_DAC	96	-.002	.085	-.25	.201	27	.036	.083	-.122	.201
AGE	96	70.625	29.347	20	112	27	46.667	23.473	20	89
SIZE	96	18.037	2.138	11.062	22.06	27	17.957	1.946	13.33	20.758
LEV	96	.53	.308	.177	1.198	27	.615	.355	.21	1.198
RAO	96	.004	.098	-.205	.18	27	.019	.137	-.205	.18
BIG_4	96	.688	.466	0	1	27	.778	.424	0	1

Source: Authors' compilation

Given the distinct pandemic response strategies adopted by each country, there might have been some government interventions such as loan guarantees, tax deferrals, and direct subsidies, that may have indirectly influenced firms' specific characteristics and eventually EM practices. to explore this further, we calculate the descriptive statistics for each country separately. The results in Table 2- Panel B indicated that during the pandemic the proxy for AEM (Abs-DAC) has a mean of -0.2% for Kenya and 3.6% for Tanzania. This suggests that Kenyan firms engaged less in earnings management during the pandemic period compared to Tanzanian counterparts. To better understand the distribution of AEM across periods and countries, we also used box plots to visualize the data.
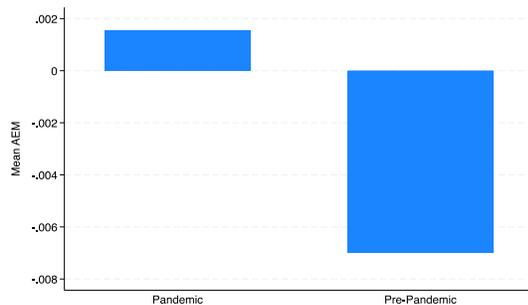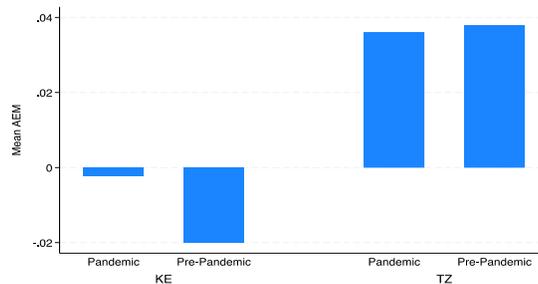

Figure 1: Pooled Sample

Figure 2: Country-wise sample

Consistent with the descriptive statistics in Figure 1, the smaller bar for the pandemic suggests that, on average, firms in both countries engaged less in AEM during the pandemic compared to the pre-pandemic period. The larger size of the box plots for Tanzania (Figure 2) both before and during the pandemic, indicates a higher degree of AEM compared to Kenya across both periods. this difference may be attributed to Kenya's more established capital market and stronger corporate governance practices, which likely increased the scrutiny of AEM activities, thereby discouraging AEM practices (Waweru and Prot 2018).

A two-sample t-test was also performed to compare the extent of AEM [Abs-DAC] between the pre-pandemic period and the pandemic period. The results show no statistically significant difference in the extent of AEM between the pre-pandemic and pandemic periods for Kenyan and Tanzanian non-financial firms, despite the significant economic shock of COVID-19. Consequently, we did not find sufficient evidence to conclude that the mean Abs-DAC changed significantly from the pre-pandemic to the pandemic period.

Table 3: Two-sample t test with equal variances

Panel A: Pooled sample						
	obs	Mean	dif	St Err	t value	p value
Pre -pandemic (2017-2019)	215	-.0091014	-.014574	.0135785	-1.0733	.2839
Pandemic period (2020-2022)	129	.0054725				
Panel B: Pandemic period (2020-2022)						
	obs	Mean	dif	St Err	t value	p-value
KENYA	96	-.0021511	-.0380823	.018486	-2.0601	.0415
TANZANIA	27	.0359312				

Source: Authors' compilation

Moreover, we investigate further whether the mean Abs-DAC differs significantly between Kenyan and Tanzanian firms, specifically during the pandemic period. The results in Table 3, panel B, indicated a statistically significant difference in the level of AEM between Kenyan and Tanzanian non-financial firms during the COVID-19 pandemic, with Tanzanian firms exhibiting higher AEM (M = 0.0359312) than Kenyan firms (M = -0.0021511) p- the value of (p = [0.0415]). This suggests a statistically significant difference in mean Abs-DAC between Kenyan and Tanzanian firms during the pandemic, thus unveiling the different patterns that were masked in the pooled analysis. Probably because Kenya not only implemented stricter lockdowns and restrictions but also introduced various fiscal and monetary policy measures to support businesses. These support mechanisms might have reduced the pressure on firms to engage in AEM.

Regression Results

Table 4 presents the results of our first main hypothesis. We used the Hausman test to select the appropriate model; the results indicated that the preferred model is Random effect (Prob>chi2= 0.2494). Table 4 displays the results of several regression analyses examining the relationship

between the measure of AEM (Abs_[DAC]) and the COVID-19 pandemic dummy while controlling for some well-established firm characteristics such as size (SIZE), profitability (ROA), leverage ratio (LEV), and audit quality (BIG_4).

The analysis was performed for the pooled sample (Models 1) and for each country separately (Model 2 &3). The results in (Model 1) demonstrate the insignificant relationship between the COVID-19 pandemic and AEM measure (Abs_[DAC]), indicating that the COVID-19 pandemic had no statistically significant influence on the level of AEM for both Kenyan and Tanzanian non-financial firms. Therefore, in line with previous literature (Ahmad-Zaluki, Campbell et al. 2011, Filip and Raffournier 2014), we also need to reject our null hypothesis. Consistent with the notion that in times of crisis, aside from the close monitoring by auditors and other regulators, the market appears to endure the firm's poor performance, and hence, the firm's managers are less motivated to manage earnings. Our findings are different from those of (Lassoued and Khanchel 2021, Xiao and Xi 2021, and Azzam and Abu-Shamleh 2024). The contradiction could be because of limited trading activity and the size of firms listed in the emerging capital markets that demotivate managers from engaging in aggressive EM practices, as it will be fruitless.

The results in Model 2 show a negative and statistically significant relationship between the AEM measure (Abs_[DAC]) and the COVID-19 pandemic dummy for Kenyan non-financial firms. Suggesting that reduced AEM practice in Kenya during the pandemic periods. As explained earlier, Kenya implemented stricter lockdowns and restrictions, which likely had a more pronounced negative impact on the economic activities and, therefore, might have limited firms' ability to manipulate revenues or expenses through accrual adjustments. Contrary to (Aljawaheri, Ojah et al. 2021), whose results indicated that the economic lockdown during the COVID-19 pandemic period adversely affected the quality of earnings.

Regarding control variables, the firm's profitability (ROA) seemed to have a highly significant negative impact on AEM during the pandemic period. Contrary to (Czapiewski 2023), during the COVID-19 pandemic, more profitable firms were more inclined to adopt the 'big bath' strategy to defer a portion of exceptionally positive current earnings to subsequent years. Our results suggest more profitable firms in Kenya and Tanzania engaging in less earnings management during the pandemic. A possible explanation could be due to the fact that profitable firms in emerging markets often have better access to capital markets and financing options. Thus less reliance on manipulated earnings to attract investors or secure loans, as they have stronger fundamentals to showcase.

Firm age (AGE) is positive and significant, suggesting that older firms have more incentive to manipulate earnings. This is in line with (Haneberg 2021) that investor confidence and reputation built up by older firms motivate them to smoothen earnings to avoid negative market reactions, which are harmful to their reputation. Our results contradict with (Yin 2022), whose results suggest that small firms are more likely to engage in increasing EM to attract investors during the pandemic.

We also found a negative but insignificant association between Big_4 audits and the extent of AEM, contradicting the common expectation of a negative significant relationship. Probably because the pandemic replaced the traditional audit procedures (on-site visits, physically inspect inventory, and in-person meetings with clients) with virtual communication and data access, thus hindering the effectiveness of some audit procedures (Albitar, Gerged et al. 2020). Nevertheless,

the results are aligned with the study by (Chen, Chiang et al. 2023), who found that the audit firm size could not play a role in constraining EM practices during the COVID-19 pandemic.

Table 4: Random Effect Regression analysis

VARIABLES	(Pooled Sample)	KENYA	TANZANIA
	Model-1	Model-2	Model-3
COVID_19	2.544	-2.813*	27.633
	(3.528)	(1.648)	(19.393)
AGE	0.170**	0.075**	0.951**
	(0.073)	(0.035)	(0.770)
SIZE	-2.468**	-2.196	-14.075
	(1.149)	(1.553)	(9.546)
LEV	3.080	6.513	43.143
	(4.524)	(4.616)	(30.790)
RAO	-0.292***	-0.338***	-0.341***
	(0.075)	(0.102)	(0.101)
BIG_4	-5.569	-2.632	-14.788
	(3.656)	(2.213)	(17.480)
Constant	18.376	26.931	158.458
	(14.080)	(20.151)	(151.395)
Observations	272	214	58
Number of firmname_cat	43	33	10

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5. Conclusion and recommendations

This paper investigates the impact of the COVID-19 pandemic on AEM practices in two East African countries - Kenya and Tanzania that share similar economic structures but adopted contrasting pandemic policy response strategies. The study was motivated by the conflicting and limited evidence on the impact of the COVID-19 pandemic on EM, particularly from the developing markets perspective (Koutoupis, Kyriakogkonas et al. 2021). The study sample comprised of 43 firms listed in the Nairobi and Dar-es-salaam Stock Exchanges, forming a balanced panel data set of 344 firm-year observations.

Our results demonstrated an insignificant positive relationship between the COVID-19 pandemic dummy and the AEM measure (Abs_[DAC]). This suggests that the COVID-19 pandemic had no statistically significant impact on the level of AEM among non-financial firms in both Kenya and Tanzania. This outcome could be due to limited trading activity in the developing capital markets which might discourage managers from engaging in aggressive EM practices, as the potential gains may be minimal. Thuese findings underscore the importance of not generalizing the results of developed countries to less developed ones (Arianpoor and Esmailzadeh Asali, 2023). Additionally, we found a negative and significant impact between Abs_[DAC]) and the pandemic

dummy for Kenyan firms, suggesting a reduced AEM practice in Kenyan non-financial firms during the pandemic period. This led to the conclusion that strict lockdowns and restrictions played a significant role in reducing AEM in the NSE-listed firms, probably because of the reduced economic activities due to lockdowns, therefore limiting firms' ability to manipulate revenues or expenses through accrual adjustments.

This study makes a valuable contribution to the existing literature on earnings management, emerging markets, and the COVID-19 pandemic by emphasizing the importance of context and the unintended consequences of government interventions. The results can be useful for investors and policymakers interested in understanding the impact of policy choices on corporate financial reporting behaviour during pandemic periods.

The study recommends that, investors should consider the specific context and qualitative factors like government interventions to pandemics when evaluating financial statements. Additionally, policymakers should be aware of the potential impact of their actions on corporate financial reporting practices. However, it is important to note that this study, like all studies, has some limitations. First, we focused on only two East African countries, leading to reduced firm-year observations. Future research should expand the scope to include data from other African countries to provide a more comprehensive understanding. Second, this study uses only discretionary accrual as an EM proxy. Some firms might have opted for other strategies, such as operational adjustments, like cost-cutting, restructuring, or strategic shifts, to weather the crisis. Future research could explore these alternative EM strategies, such as real EM to provide a broader view of corporate responses during the pandemic.

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