
Institutional (Governance) Quality and Earnings Management in African Listed Non-Financial Firms: Evidence from A Cross-Country Study

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Abstract: This study examines the effects of governance quality, measured through the Worldwide Governance Indicators (WGI), on earnings management. The analysis employs balanced panel data from firms listed in South Africa, Nigeria, Ghana, Kenya, Tanzania, Zambia, and Uganda over the period 2004–2023. Institutional indicators are sourced from the Worldwide Governance Indicators, while firm-level and macroeconomic data are obtained from audited financial statements and World Bank databases. Earnings management is measured using discretionary accruals estimated with the Modified Jones model. The empirical analysis combines pooled Ordinary Least Squares (OLS), fixed- and random-effects models, and a dynamic two-step System Generalized Method of Moments (System-GMM) estimator with Windmeijer-corrected robust standard errors to address endogeneity, unobserved heterogeneity, and the persistence of earnings management. The findings indicate that the rule of law, government effectiveness, voice and accountability, and audit quality significantly reduce earnings management, whereas regulatory quality and political stability are positively associated with discretionary reporting. Firm size, leverage, sales growth, and inflation increase earnings manipulation, while profitability constrains it. Gross Domestic Product (GDP) growth is statistically insignificant. The study advances the literature by integrating institutional, firm-specific, and macroeconomic determinants within a dynamic cross-country framework, demonstrating that the effectiveness of governance mechanisms depends not only on their formal design but also on their implementation across institutional settings. The findings provide policy-relevant evidence for strengthening governance quality, enhancing financial reporting transparency, and supporting sustainable corporate governance and capital market development in emerging African economies.

Keywords: Discretionary accrual, earnings management, endogeneity, institutional quality, system-GMM, GDP, Modified Jones model, balanced panel data, earnings manipulation.

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INTRODUCTION

The quality of a country's institutional environment is a fundamental determinant of corporate financial reporting, particularly in emerging economies where regulatory enforcement and legal infrastructure may be uneven. Institutional quality, reflected in regulatory effectiveness, rule of law, political stability, government efficiency, control of corruption, and accountability, shapes managerial incentives and constrains opportunistic reporting behavior. Where enforcement is weak or compromised by regulatory capture, managers face lower expected costs of manipulation and greater opportunity to exploit information asymmetries through discretionary accounting practices, thereby reducing the reliability of reported performance (Adusei & Tchankam, 2023; Onwuanaku & Ihedimma, 2022). Consistent with this view, Bawa, Abubakar, and Musa (2021) identify earnings manipulation as prevalent in environments characterized by limited institutional oversight.

Cross-country evidence establishes that stronger investor protection and legal enforcement are associated with lower earnings manipulation and higher reporting transparency (Leuz, Nanda, & Wysocki, 2003). More recent studies confirm that enforcement capacity, litigation risk, and regulatory oversight significantly influence managerial reporting incentives across both developed and emerging markets (Ali, Hussain, & Khan, 2024; Mahmood, Abbas, & Awan, 2021). These findings underscore the disciplining role of external governance structures. However, much of the existing literature relies on aggregated governance indices or isolated institutional proxies, offering limited insight into how distinct governance dimensions operate within heterogeneous institutional settings.

This limitation is particularly relevant in African capital markets, where institutional environments vary substantially across countries and where enforcement asymmetries often coexist with formal regulatory reforms. Despite growing interest in emerging markets, empirical evidence on the institutional determinants of earnings management in Africa remains fragmented and largely confined to single-country studies (Mensah & Agyei-Mensah, 2023; Onwuanaku & Ihedimma, 2022). Existing research has focused predominantly on developed economies or selected Asian markets, leaving the diverse governance landscape of Africa comparatively underexplored (Elamer, Ntim, & Abdou, 2022). Given differences in regulatory capacity, political stability, and corruption control across African jurisdictions, a comparative multi-country perspective is necessary to better understand how institutional variation shapes reporting behavior.

Against this backdrop, this study examines how six dimensions of institutional (governance) quality, control of corruption, rule of law, political stability, government effectiveness, regulatory quality, and voice and accountability, influence earnings management among non-financial listed firms across selected African economies. By integrating country-level governance indicators with firm-level financial data, the analysis evaluates whether stronger institutional frameworks function as effective constraints on discretionary accruals. This question is increasingly salient as African markets integrate into global capital systems, where governance credibility and reporting transparency are central to investor confidence (Owusu, Saat, & Aziz, 2023).

Prior African studies have largely emphasized internal governance mechanisms, such as board characteristics, audit quality, and ownership structure (Abdulai & Owusu-Antwi, 2023; Bawa et al., 2021), while broader institutional factors are often treated as peripheral controls (Osei & Boateng, 2022). Such an approach understates the multidimensional role of national institutions as external governance mechanisms. Moreover, the predominance of single-country evidence limits understanding of cross-country institutional heterogeneity and its implications for earnings manipulation.

To address these gaps, this study undertakes a cross-country panel analysis of non-financial listed firms in South Africa, Nigeria, Ghana, Kenya, Tanzania, Zambia, and Uganda. By disaggregating institutional (Governance) quality into its constituent dimensions, the analysis captures their heterogeneous effects on discretionary accruals and advances research beyond aggregated governance measures and country-specific designs. While these countries capture substantial regional and institutional diversity across Africa, the findings should be interpreted as reflecting the selected sample rather than the continent as a whole.

This study makes three interrelated contributions. Theoretically, it strengthens the integration of Institutional and Agency perspectives by identifying institutional quality as a critical determinant of managerial reporting incentives. It further highlights that the effectiveness of governance institutions is shaped not only by their formal configuration but also by the credibility and consistency of their implementation. This perspective provides a richer understanding of how variations in institutional effectiveness influence managerial reporting behaviour and earnings management practices. Methodologically, it employs a dynamic System-GMM framework within a multi-country African panel, addressing endogeneity, earnings persistence, and macroeconomic volatility, thereby providing a more rigorous assessment of institutional effects than static cross-country models. Contextually, it positions African capital markets as a heterogeneous institutional laboratory, offering comparative evidence on how governance capacity shapes earnings quality in emerging markets.

Accordingly, this study investigates the extent to which institutional (Governance) quality influences earnings management among non-financial listed firms in African economies. The objective is to evaluate the effects of institutional (governance) dimensions on discretionary accrual behavior while controlling for firm-specific and macroeconomic factors. To ensure robust inference, the analysis employs pooled OLS, fixed and random effects estimators, and the system generalized method of moments technique. The remainder of the paper proceeds as follows. The next section reviews the theoretical foundations and empirical literature and develops the conceptual framework. Subsequent sections describe the research design and data, present the empirical results, and conclude with implications, limitations, and directions for future research.

LITERATURE REVIEW

Theoretical Foundations

This study is grounded in an integrated framework combining Institutional Theory, Agency Theory, Stakeholder Theory, and Positive Accounting Theory (PAT) to explain how macro-level governance structures interact with managerial incentives to shape earnings management (EM) in African capital markets. Together, these perspectives provide a multidimensional explanation of how institutional environments constrain or enable opportunistic reporting. Institutional Theory emphasizes the role of regulatory enforcement, governance structures, and societal norms in shaping organizational conduct (DiMaggio & Powell, 1983; Scott, 2014). Strong institutional systems promote transparency, while weak enforcement environments increase managerial discretion and earnings manipulation (Gokhale, 2024; Mlawu, Ncube, & Dube, 2025). Given substantial cross-country variation in institutional strength across Africa, this framework is particularly relevant. An important perspective within Institutional Theory concerns the distinction between the existence of formal governance arrangements and their effectiveness in shaping organisational conduct. Institutional environments may display substantial variation in the extent to which legal provisions, regulatory frameworks, and accountability mechanisms are translated into observable organisational practices. As a result, firms operating within apparently similar governance structures may face different levels of monitoring, enforcement pressure, and compliance expectations (Gokhale, 2024). This divergence helps explain why improvements in governance indicators do not always produce corresponding improvements in reporting quality. In the context of earnings management, the effectiveness of institutional arrangements depends not only on their formal presence but also on the credibility, consistency, and capacity of the mechanisms through which they are implemented. Consequently, institutional quality may exert heterogeneous effects on managerial reporting behaviour across countries and over time.

Agency Theory explains how information asymmetry and conflicts between managers and shareholders incentivize opportunistic behavior, especially where monitoring is weak (Edeh, 2025; Jensen & Meckling, 1976). Strong institutional quality mitigates agency problems through enhanced investor protection and regulatory oversight (Edeh, 2025; Yang, Hsu, Kweh, & Asif, 2025), positioning institutional quality as an external governance mechanism moderating agency-driven manipulation. Stakeholder Theory recognizes broader societal and political pressures on corporate conduct (Freeman, 1984). Managers may adjust earnings to

maintain legitimacy under regulatory and social scrutiny (Amin, 2021; Nkegbe & Moffatt, 2022). Consistent with stakeholder theory, stronger voice and accountability mechanisms can enhance stakeholder oversight and increase managerial accountability, thereby reducing opportunities for opportunistic financial reporting (Velte, 2024). PAT complements these perspectives by positing that accounting choices reflect managerial responses to compensation incentives, debt covenants, and political costs (Bui, 2024; Watts & Zimmerman, 1986). In weaker institutional environments, greater managerial discretion tends to amplify incentives for opportunistic financial reporting because ineffective monitoring and enforcement reduce the constraints on managerial behaviour (El Diri, Lambrinoudakis, & Alhadab, 2020; Leuz et al., 2003; Yang et al., 2025). Integrating PAT with institutional theory clarifies how stronger governance frameworks restrict opportunistic accounting choices. Collectively, these theories position institutional quality as a central external governance mechanism shaping managerial incentives, stakeholder monitoring, and accounting discretion across African capital markets.

Conceptual Framework

Building on these theories, the conceptual framework positions institutional quality as the primary external governance mechanism influencing earnings management. Stronger legal systems, regulatory effectiveness, political stability, and corruption control increase compliance pressure and enforcement risk (DiMaggio & Powell, 1983; Gokhale, 2024; Mlawu et al., 2025; Scott, 2014). Agency Theory suggests that improved investor protection reduces information asymmetry and managerial opportunism (Edeh, 2025; Jensen & Meckling, 1976). Stakeholder Theory further emphasizes the disciplining role of public accountability and regulatory scrutiny (Amin, 2021; Freeman, 1984; Nkegbe & Moffatt, 2022). PAT reinforces that stronger enforcement reduces incentives for discretionary accounting choices (Leuz et al., 2003; Watts & Zimmerman, 1986).

Accordingly, institutional quality dimensions, control of corruption, rule of law, regulatory quality, government effectiveness, political stability, and voice and accountability, are expected to negatively influence earnings management. Firm-specific and macroeconomic controls are included to isolate institutional effects.

Institutional Quality and Earnings Management: Theoretical Relationship

The following conceptual model is formulated to illustrate the relationship between institutional quality, firm-specific, and macroeconomic controls as independent variables, and earnings management measured through discretionary accruals as the dependent variable (see Figure 1).

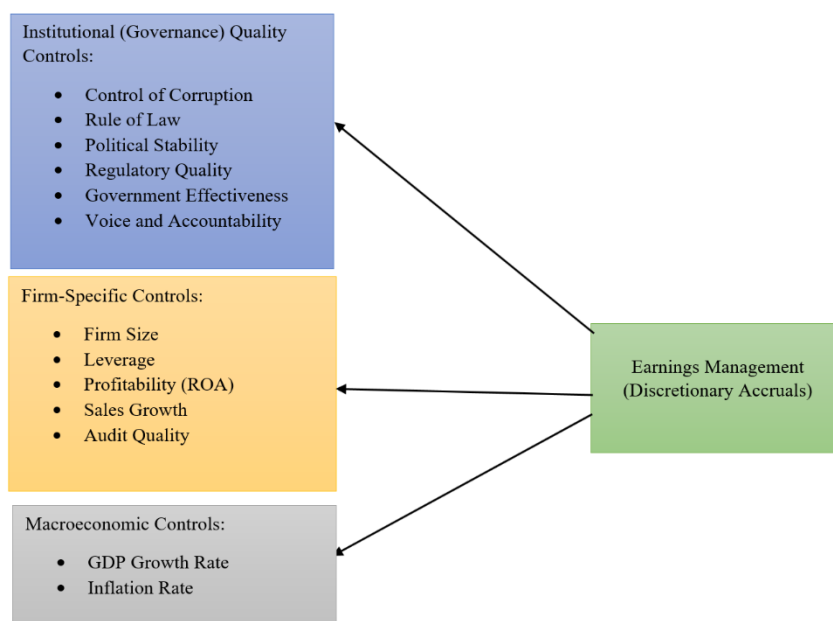


Figure 1: Conceptual Framework of the Relationship between Institutional Quality and Earnings Management

Integrated Empirical Literature Review

Empirical research consistently identifies institutional quality as a central determinant of earnings management through its influence on enforcement credibility, monitoring intensity, and managerial incentives. Foundational cross-country evidence demonstrates that weak investor protection and ineffective legal enforcement are associated with higher levels of earnings manipulation (Leuz et al., 2003). Subsequent research refines this perspective by emphasizing that enforcement credibility, rather than formal statutory design alone, determines reporting discipline (Ali et al., 2024; Mahmood, Kouser, & Azeem, 2021). Shareholder protection mechanisms constrain discretionary accruals only when supported by effective judicial systems and regulatory oversight (Gokhale, 2024; Lakha, Adebola, & Mensah, 2024). This refinement of the legal origin perspective suggests that similar formal legal systems may yield divergent reporting outcomes depending on institutional capacity and enforcement strength.

Cross-country evidence further shows that corruption and weak regulatory systems increase discretionary accruals (De Sousa, 2023) while stronger anti-corruption environments and transparency-enhancing disclosures reduce manipulation (Ghazwani, Al-Hadi, Taylor, & Al-Yahyaee, 2023). However, emerging market research highlights institutional decoupling situations where formal reforms exist without effective implementation (Elamer et al., 2022; Mensah & Agyei-Mensah, 2023). In such contexts, governance codes and statutory protections do not automatically translate into improved earnings quality. Institutional complementarity research adds that governance mechanisms operate interactively rather than independently; anti-corruption controls, judicial effectiveness, regulatory quality, and civic accountability reinforce one another in constraining opportunistic reporting (Ali et al., 2024; Lakha et al., 2024). Where complementarities are weak, the disciplinary effect of individual mechanisms diminishes (Tamba, Muriithi, & Mugo, 2023).

African-focused evidence reflects these theoretical tensions. Agyemang and Dzansi (2022) report that strengthened anti-corruption institutions significantly constrain earnings manipulation in Ghana, whereas Okoye and Ijeoma (2022) find no significant effect in Nigeria, attributing this to weak enforcement credibility. Broader regional analysis by Tamba et al. (2023) suggests that macroeconomic volatility may overshadow corruption controls. Similarly, while stronger legal enforcement reduces manipulation in Nigeria (Afolabi & Onifade, 2023), regulatory capture weakens institutional effectiveness in parts of South Africa (Chigbo & Nwachukwu, 2021), and sectoral heterogeneity persists across West Africa (Oladimeji, Adeyemi, & Olowookere, 2024). These mixed findings reinforce the view that institutional effects depend not merely on formal structures but on enforcement quality and contextual capacity.

Beyond corruption and legal systems, political instability, regulatory quality, and government effectiveness also shape reporting incentives. Political instability has been shown to intensify earnings manipulation in certain contexts (Kariuki & Otieno, 2022; Lakha et al., 2024), although regime effects vary (Ngobeni & Makhoba, 2023; Tamba et al., 2023). Regulatory quality and government effectiveness generally constrain discretionary reporting (Ali et al., 2024; Lakha et al., 2024) while voice and accountability enhance civic monitoring pressures.

Macroeconomic instability constitutes an additional layer of influence. Inflation and GDP volatility increase discretionary accruals (Bekele & Mensah, 2022; Mubiru & Odhiambo, 2023; Ndlovu & Kamau, 2024; Nguyen & Nguyen, 2020), whereas GDP growth shows weaker or inconsistent effects. At the firm level, evidence remains mixed. Ozili (2022) documents income smoothing even under Big-4 supervision, while Hadiza and Yahaya (2024) highlight the effectiveness of audit quality in reducing manipulation. El Diri (2018) attributes higher earnings management in emerging markets to weak enforcement structures, and Alrobai, Al-Hroot, and Abuaddous (2025); Ramadhani, Muda, and Harahap (2024) and Yang et al. (2025) demonstrate context-dependent effects of size, leverage, and audit quality.

Despite expanding evidence, African research remains fragmented and largely single-country in focus. Few studies examine multiple institutional dimensions jointly with macroeconomic uncertainty using harmonized governance indicators. By disaggregating institutional quality into six dimensions within a unified cross-country framework, this study addresses these limitations and provides a more granular assessment of

how institutional enforcement, complementarities, and macroeconomic conditions jointly shape earnings management across African capital markets.

Although the theoretical framework generally suggests that stronger governance institutions constrain opportunistic financial reporting, prior empirical evidence indicates that the effects of individual governance dimensions may not be uniform across institutional settings. Differences in enforcement capacity, regulatory effectiveness, political conditions, and accountability structures can influence the extent to which governance mechanisms affect managerial reporting behaviour. Consequently, while stronger governance quality is expected to reduce earnings management overall, the magnitude and direction of the effects may vary across specific institutional dimensions.

Drawing on the integrated theoretical framework and the diverse empirical evidence reviewed above, the following hypotheses are advanced to investigate how governance quality, firm-specific factors, and macroeconomic conditions shape earnings management behaviour in African capital markets.

Hypotheses Development

Drawing on the integrated theoretical framework and empirical evidence, the following hypotheses are proposed.

H₁: Institutional (Governance) quality is significantly associated with earnings management among African non-financial listed firms, although the effects may vary across individual governance dimensions.

H₂: Firm-specific characteristics are significantly associated with earnings management among African non-financial listed firms, although the direction and magnitude of the effects may differ across firm-level attributes.

H₃: Macroeconomic conditions are significantly associated with earnings management among African non-financial listed firms, with individual macroeconomic indicators exerting potentially different effects on reporting behaviour.

MATERIALS AND METHODS

Research Design

This study employs a quantitative explanatory design to examine the relationship between institutional quality and earnings management among non-financial listed firms in selected African economies. A multi-country panel framework covering 2004–2023 integrates firm-level financial data with country-level governance and macroeconomic indicators. The panel structure captures both cross-country institutional heterogeneity and temporal dynamics in reporting behavior. By exploiting firm- and time-level variation, the design enables robust estimation of the association between discretionary accruals and institutional, macroeconomic, and firm-specific determinants across African capital markets.

Population and Sampling

The sample comprises 245 non-financial listed firms drawn from South Africa, Nigeria, Ghana, Kenya, Tanzania, Zambia, and Uganda over the 2004–2023 period. Financial institutions are excluded due to their distinct regulatory environments and accrual structures, which may bias earnings management measurement (Abdelkarim, Al-Gamrh, & Al-Dhamari, 2024). The selected exchanges were chosen based on data availability, market depth, and institutional diversity. Firms with incomplete financial records, prolonged suspensions, mergers, delistings, or inconsistent reporting were excluded to enhance comparability and estimation reliability. The use of a balanced panel necessarily required the exclusion of firms with incomplete observations over the study period. While this approach enhances data consistency and facilitates dynamic panel estimation, it may introduce survivorship bias if excluded firms differ systematically from those retained in the sample. For example, firms experiencing financial distress, weak governance structures, delisting, or reporting irregularities may be underrepresented. Consequently, the findings should be interpreted within the context of surviving listed firms, and caution should be exercised when generalizing the results to all firms operating within the selected markets. The resulting sample reflects substantial cross-country variation in institutional

(governance) quality, consistent with established cross-country accounting research (Boubakri, Guedhami, Mishra, & Saffar, 2015; Leuz et al., 2003).

Given the absence of comprehensive historical disclosure across African exchanges, firm identification was obtained from the African Markets database. To ensure data consistency for dynamic estimation, the analysis focuses on firms with continuous reporting across the study period. While this balanced panel may introduce potential selection bias, particularly in weaker institutional settings, it aligns with prior international research prioritizing data integrity in panel-based accounting studies (Boubakri et al., 2015; Leuz et al., 2003).

Table 1 presents the sectoral distribution of firms across consumer goods, industrial, oil and gas, and telecommunications sectors within the selected exchanges.

Table 1: Sectoral Distribution of Sample Firms by Stock Exchange Data Collection

Country	Stock Exchange	Consumer Goods	Industrials	Oil & Gas	Telecommunications	Total Firms
South Africa	JSE	20	42	3	6	71
Nigeria	NGX	32	17	9	6	64
Kenya	NSE	18	15	4	7	44
Ghana	GSE	10	4	3	4	21
Tanzania	DSE	9	3	2	3	17
Uganda	USE	6	2	1	2	11
Zambia	LuSE	8	6	2	1	17
Total		103	89	24	29	245

Data Collection

The study relies on secondary data. Firm-level financial information was obtained from audited annual reports and reputable financial databases to construct discretionary accrual measures and firm-specific controls. Institutional quality indicators were sourced from the Worldwide Governance Indicators (WGI), while macroeconomic variables (GDP growth and inflation) were extracted from the World Development Indicators (WDI). Firm-year observations were matched with corresponding country-year governance and macroeconomic data based on listing country and fiscal year, producing the final panel dataset.

Variable Measurement

Earnings management is proxied by discretionary accruals estimated using the Modified Jones (1991) model, consistent with established accounting literature (Dechow, Sloan, & Sweeney, 1995; Kothari, Leone, & Wasley, 2005). Total accruals were computed from financial statements, scaled by lagged total assets, and decomposed to isolate discretionary components. The absolute value of discretionary accruals captures the magnitude of managerial discretion in financial reporting.

Total accruals for each firm i in year t are calculated as:

$$TAC_{it} = (CA_{it} - CA_{it-1}) - (CL_{it} - CL_{it-1}) - (Cash_{it} - Cash_{it-1}) + (STD_{it} - STD_{it-1}) - Dep_{it} \quad (1)$$

Where:

TAC_{it} = Total accruals for firm i in year t .

CA_{it} = Current assets for firm i in year t .

CL_{it} = Current liabilities for firm i in year t .

$Cash_{it}$ = Cash and cash equivalents for firm i in year t .

STD_{it} = Short-term debt for firm i in year t .

Dep = Depreciation expense.

Then scale accruals:

$$TA_{it} / A_{it-1}$$

Where:

A_{it-1} = Lagged total assets.

Modified Jones Model (Standard Notation)

Discretionary accruals were then estimated using Modified (Jones, 1991)

$$TAC_{it}/A_{it-1} = \alpha_0(1/A_{it-1}) + \alpha_1[(\Delta REV_{it} - \Delta REC_{it})/A_{it-1}] + \alpha_2(PPE_{it}/A_{it-1}) + \varepsilon_{it} \quad (2)$$

Modified (Jones, 1991) Model

$$DAC_{it} = (TAC_{it}/A_{it-1}) - [\alpha_0(1/A_{it-1}) + \alpha_1((\Delta REV_{it} - \Delta REC_{it})/A_{it-1}) + \alpha_2(PPE_{it}/A_{it-1})] + \varepsilon_{it} \quad (3)$$

Where:

ΔREV_{it} = Change in revenue.

ΔREC_{it} = Change in receivables.

PPE_{it} = Property, plant, and equipment.

ε_{it} = Residual (Discretionary accruals).

Following prior literature, the Modified Jones Model is estimated cross-country by country-year. That is, for each country and year, a separate regression is run using all nonfinancial firms operating in that country during the year with accurate and reliable data.

Thus, discretionary accruals are defined as:

$$DAC_{it} = \varepsilon_{it}$$

The residuals from the accrual regression capture managerial reporting discretion. All continuous variables were winsorized at the 1st and 99th percentiles to mitigate outlier effects. Observations with missing financial information were excluded, and all variables were deflated by lagged total assets to ensure comparability across firms and time. These procedures allow for the replication of discretionary accruals using raw financial statement data. All variable definitions and estimation steps followed Dechow et al. (1995) and Kothari et al. (2005).

The Modified Jones model was estimated separately for each country-year grouping to account for cross-country institutional differences and temporal variations in accrual-generating processes. The estimation procedure generated valid discretionary accrual residuals for all sample partitions included in the analysis, which were subsequently used as the proxy for earnings management. Although detailed first-stage diagnostics, such as average R^2 values, are not reported, the estimation process yielded usable residual measures across the sample period.

Justification of Earnings Management Proxy

Although alternative proxies such as real earnings management and fraud-based measures have gained attention, Jones (1991) discretionary accrual model remains the dominant benchmark in empirical accounting research due to its methodological transparency, replicability, and reliance on publicly available financial statement data (Dechow et al., 1995; Kothari et al., 2005; Rigamonti, Dossi, & Patelli, 2024). By decomposing total accruals into normal and discretionary components, the model captures managerial reporting discretion in a consistent and comparable manner. Its continued application in recent cross-country studies supports its robustness, particularly in emerging markets where data constraints limit the feasibility of alternative proxies (Agyemang & Dzansi, 2022; Ali et al., 2024).

Theoretically, the model aligns with Agency Theory and Positive Accounting Theory, which posit that managers exploit accounting discretion in response to contractual incentives, political costs, and reputational pressures (Jensen & Meckling, 1976; Watts & Zimmerman, 1986). It is also consistent with Institutional Theory, which predicts that stronger governance environments constrain abnormal accrual behavior through enhanced enforcement and accountability (Scott, 2014). Accordingly, the Jones (1991) framework provides both empirical reliability and theoretical coherence for examining earnings management in African capital markets.

Measurement of Institutional, Macroeconomic, and Firm-Level Variables

Table 2 presents the operational definitions of the study variables. Institutional quality is measured using the Worldwide Governance Indicators (WGI), covering control of corruption, rule of law, political stability, regulatory quality, government effectiveness, and voice and accountability. Each dimension ranges from -2.5 (weak governance) to +2.5 (strong governance). Macroeconomic conditions are proxied by annual inflation

and real GDP growth from the World Development Indicators. Firm-level controls include firm size (log of total assets), leverage (total liabilities/total assets), profitability (return on assets), sales growth (annual revenue change), and audit quality (a binary indicator equal to one for Big Four auditors and zero otherwise).

In this study, institutional quality is conceptualized as governance quality and measured using the six dimensions of the Worldwide Governance Indicators (WGI): control of corruption, rule of law, political stability, regulatory quality, government effectiveness, and voice and accountability.

Table 2: Variables Operational Definition and Measurement

S/N	Variable Definition	Type	Measurement	Sources
1	Earnings Management (Discretionary Accruals)	Dependent	Absolute value of discretionary accruals estimated using the Modified Jones model; Jones (1991).	Dechow et al. (1995); Jones (1991); Kothari et al. (2005) and Leuz et al. (2003).
2	Control of Corruption	Independent (Institutional)	WGI annual estimate score (-2.5 to +2.5).	Kaufmann, Kraay, and Mastruzzi (2010) and Leuz et al. (2003)
3	Rule of Law	Independent (Institutional)	WGI annual estimate score.	Kaufmann et al. (2010) and La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998)
4	Political Stability	Independent (Institutional)	WGI annual estimate score.	Kaufmann et al. (2010) and Boubakri et al. (2015)
5	Regulatory Quality	Independent (Institutional)	WGI annual estimate score.	Kaufmann et al. (2010) and Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2002)
6	Government Effectiveness	Independent (Institutional)	WGI annual estimate score.	Kaufmann et al. (2010) and North (1990)
7	Voice and Accountability	Independent (Institutional)	WGI annual estimate score.	Kaufmann et al. (2010) and Freeman (1984)
8	Inflation Rate	Independent (Macroeconomic)	Annual percentage change in consumer price index (WDI).	Fischer (1993) and Mubiru and Odhiambo (2023)
9	GDP Growth	Independent (Macroeconomic)	Annual real GDP growth rate (%) from WDI.	Barro (1991) and Nguyen and Nguyen (2022)
10	Firm Size	Control	Natural logarithm of total assets.	Watts and Zimmerman (1986)
11	Leverage	Control	Total liabilities divided by total assets.	Jensen and Meckling (1976)
12	Profitability (ROA)	Control	Net income divided by total assets.	Kothari et al. (2005)
13	Sales Growth	Control	Annual percentage change in sales.	Richardson, Sloan, Soliman, and Tuna (2005)
14	Audit Quality	Control	Dummy variable: 1 if audited by a Big 4 firm, 0 otherwise.	DeAngelo (1981) and Francis (2004)

Study Models

The empirical analysis employs a multi-country panel framework integrating firm-level, institutional, and macroeconomic variables, consistent with prior cross-country governance research (Boubakri et al., 2015; Leuz et al., 2003). Descriptive statistics and correlation analysis were conducted initially, while multicollinearity was

assessed using variance inflation factors (Gujarati & Porter, 2009). Panel unit root tests ensured stationarity, and cross-sectional dependence was examined using the Breusch and Pagan (1980) LM and Pesaran (2004) CD tests (Pesaran, 2004; Pesaran, 2015).

Estimation begins with pooled ordinary least squares (Baltagi, 2008), followed by fixed and random effects models to account for unobserved heterogeneity, with model selection guided by the Hausman (1978) test (Wooldridge, 2010). To address endogeneity and dynamic persistence, the system generalized method of moments (system-GMM) estimator is applied (Arellano & Bover, 1995; Blundell & Bond, 1998). The dynamic specification includes a lagged dependent variable, treats firm-level controls as predetermined, and assumes institutional and macroeconomic variables are exogenous.

Model validity is evaluated using Arellano–Bond serial correlation tests and the Hansen over-identification test, with instrument proliferation controlled following (Roodman, 2009).

Panel Regression Models

Model 1: Pooled Ordinary Least Squares (Pooled OLS)

To examine the relationship between institutional quality and earnings management, the analysis begins with a pooled ordinary least squares (POLS) specification as a baseline estimator.

$$DAC_{i,t} = \beta_0 + \sum_{k=1}^6 \beta_k IQ_{k,c,t} + \sum_{m=7}^{11} \beta_m X_{m,i,t} + \beta_{12} GDP_G_{c,t} + \beta_{13} Inf_{c,t} + \varepsilon_{i,t} \quad (4)$$

Where: $IQ_{k,c,t}$ stands for CC, RL, PS, RQ, GE, VA as described below and $X_{m,i,t}$ stands for Size, Lev, ROA, Sales_G. AudQ is also described below. Table 3 presents the definitions of the dependent, independent, control, and macroeconomic variables, together with the notation used in the empirical model.

Table 3: Definition of Variables and Model Notation

Symbol	Description
DAC_{it}	Discretionary Accruals for firm i at year t (measure of earnings management)
CC_{ct}	Control of Corruption (country c , year t)
RL_{ct}	Rule of Law (Country c , year t)
PS_{ct}	Political Stability (Country c , year t)
RQ_{ct}	Regulatory Quality (Country c , year t)
GE_{ct}	Government Effectiveness (Country c , year t)
VA_{ct}	Voice and Accountability (Country c , year t)
$\ln FirmSize_{it}$	Natural log of Firm Size (firm i , year t)
Lev_{it}	Leverage (Firm i , year t)
ROA_{it}	Return on Assets (Firm i , time t)
$Sales_G_{it}$	Sales Growth (Firm i , time t)
$AudQ_{it}$	Audit Quality (Firm i , time t)
GDP_G_{ct}	GDP Growth Rate (Country c , time t)
Inf_{ct}	Inflation Rate (Country c , time t)
ε_{it}	Error Term

Model 2: Fixed Effects

To account for unobserved firm-specific heterogeneity that may bias the pooled estimates, we specify the fixed-effects model as follows:

$$DAC_{i,t} = \beta_0 + \sum_{k=1}^6 \beta_k IQ_{k,c,t} + \sum_{m=7}^{11} \beta_m X_{m,i,t} + \beta_{12} GDP_G_{c,t} + \beta_{13} Inf_{c,t} + \alpha_i + \lambda_t + \mu_{i,t} \quad (5)$$

Where:

α_i = Country fixed effect (unobserved, time-invariant heterogeneity).

λ_t = Time fixed effect (common shocks, global crisis, regional shocks, and policy cycles).

$\mu_{i,t}$ = Idiosyncratic error term varying across i and t .

Model 3: Random Effects

As an alternative to the fixed-effects specification, we estimate the random-effects model under the assumption that unobserved firm effects are uncorrelated with the regressors.

$$DAC_{i,t} = \beta_0 + \sum_{k=1}^6 \beta_k IQ_{k,c,t} + \sum_{m=7}^{11} \beta_m X_{m,i,t} + \beta_{12} GDP_G_{c,t} + \beta_{13} Inf_{c,t} + \lambda_t + \omega_i + \varepsilon_{i,t} \quad (6)$$

where:

ω_i = Random country-specific component.

$\varepsilon_{i,t}$ = Idiosyncratic error term.

$\mu_{i,t}$ = Composite error ($\mu_{i,t} = \omega_i + \varepsilon_{i,t}$).

Model 4: System-GMM

To address potential endogeneity and persistence in earnings management, we estimate a dynamic specification using the system-GMM approach.

$$DAC_{i,t} = \alpha EM_{i,t-1} + \sum_{k=1}^6 \beta_k IQ_{k,c,t} + \sum_{m=7}^{11} \beta_m X_{m,i,t} + \beta_{12} GDP_G_{c,t} + \beta_{13} Inf_{c,t} + \lambda_t + \omega_i + \varepsilon_{i,t} \quad (7)$$

where:

$EM_{i,t-1}$ represents the endogenous variable and the instrument with appropriate lags.

The balanced panel consists of 245 non-financial listed firms observed over 20 years (2004–2023), yielding 4,900 firm-year observations. Given the large cross-sectional dimension and moderate time span, System-GMM is well-suited for controlling unobserved heterogeneity, dynamic persistence, and endogeneity (Arellano & Bover, 1995; Blundell & Bond, 1998). The dynamic model is estimated using a two-step System-GMM with Windmeijer-corrected robust standard errors (Windmeijer, 2005). Firm-level controls and the lagged dependent variable are treated as predetermined or endogenous and instrumented using internal lags, whereas institutional and macroeconomic variables are treated as weakly exogenous. Instrument proliferation is limited by restricted lag windows and collapsed instrument matrices (Roodman, 2009). Model diagnostics include the Arellano–Bond serial correlation tests for AR(1) and AR(2) in first differences, and the Hansen test of over-identifying restrictions.

RESULTS AND DISCUSSION

Descriptive Analysis of the Study Variables

Table 4 reports the summary statistics. The mean absolute discretionary accruals (DAC) of 0.136 suggests moderate earnings management on average, with substantial dispersion indicating heterogeneity in reporting behavior across firms. This variation is consistent with Agency Theory, which predicts opportunistic discretion under uneven monitoring conditions.

Institutional quality indicators largely exhibit negative mean values, reflecting governance weaknesses across sampled African economies. Political stability shows notable volatility, highlighting institutional heterogeneity anticipated by Institutional Theory to influence corporate behavior differently across contexts. Firm-level variables also demonstrate cross-sectional variation. While firm size is relatively stable, leverage and profitability display wider dispersion, consistent with Positive Accounting Theory predictions regarding incentive-driven reporting behavior. Sales growth variability further indicates exposure to firm-level performance shocks common in emerging markets. Macroeconomic indicators, particularly inflation and GDP growth, fluctuate considerably across the sample period, supporting their inclusion as control variables.

Given the presence of extreme observations in discretionary accruals, leverage, profitability, sales growth, GDP growth, and inflation, continuous variables are winsorized at the 1st and 99th percentiles following established accounting research (Kothari et al., 2005; Leuz et al., 2003; Ramadhani et al., 2024). Re-estimation using winsorized data produces stable coefficient signs and significance levels, indicating that results are not driven by outliers.

Table 4: Descriptive Statistics of the Study Variables

Variables	Mean	Std. Dev.	Minimum	Maximum	Observations
DAC	0.1358	0.1503	0.0002	1.3723	4900
CC	-0.5079	0.5038	-1.3834	0.4839	4900
RL	-0.4113	0.4649	-1.4397	0.1813	4900
PS	-0.7143	0.8379	-2.2111	0.6610	4900
RQ	-0.2859	0.4928	-1.2928	0.7470	4900
GE	-0.4164	0.5013	-1.2132	0.5671	4900
VA	0.0186	0.5539	-0.8689	0.7833	4900
InFirmSize	0.1681	0.0201	0.1239	0.2187	4900
Lev	0.2905	0.1071	0.0119	2.5152	4900
ROA	0.3111	0.1272	0.0142	0.8718	4900
Sales_G	0.1080	0.3612	-0.9998	1.6160	4900
GDP_G	4.3501	3.0638	-6.1689	14.0471	4900
Inf	0.0576	0.0528	-0.0617	0.3811	4900

Note: DAC = discretionary accruals; CC = control of corruption; RL = rule of law; PS = political stability; RQ = regulatory quality; GE = government effectiveness; VA = voice and accountability; InFirmSize = natural log of firm size; Lev = leverage; ROA = return on assets; Sales_G = sales growth; Aud_Q = audit quality; GDP_G = gross domestic product growth; and Inf = inflation.

Pearson Correlation Matrix

Table 5 presents the Pearson correlation coefficients among the study variables. Discretionary accruals (DAC) are negatively associated with key institutional indicators, particularly control of corruption, rule of law, and government effectiveness, indicating that stronger governance environments correspond with lower earnings manipulation. At the firm level, leverage shows a positive relationship with DAC, consistent with incentive-based reporting behavior, whereas firm size and profitability display modest inverse associations. Inflation is positively correlated with discretionary accruals, suggesting heightened reporting pressures during periods of macroeconomic instability. Overall, the correlation structure is consistent with theoretical predictions and supports the specification of the subsequent multivariate panel estimations.

Table 5: Correlation coefficient

Variables	DAC	CC	RL	PS	RQ	GE	VA	lnFirmSize	Lev	ROA	Sales_G	Audit_Q	GDP_G	Inf
DAC	1													
CC	0.009	1												
RL	0.107***	0.901***	1											
PS	0.255***	0.854***	0.865***	1										
RQ	-0.004	0.871***	0.835***	0.726***	1									
GE	-0.005	0.914***	0.883***	0.766***	0.944***	1								
VA	-0.048***	0.906***	0.896***	0.746***	0.839***	0.902***	1							
lnFirmSize	0.019	-0.029**	-0.013	-0.008	-0.025*	-0.029**	-0.035**	1						
Lev	-0.026*	-0.077***	-0.064***	-0.067***	-0.078***	-0.084***	-0.051***	0.037***	1					
ROA	0.022	-0.095***	-0.045***	-0.037***	-0.095***	-0.106***	-0.089***	0.024*	0.022	1				
Sales_G	0.165***	0.036**	0.043***	0.048***	0.026*	0.039***	0.047***	0.022	0.020	-0.016	1			
Audit_Q	-0.053***	-0.075***	-0.078***	-0.067***	-0.136***	-0.133***	-0.101***	0.030**	-0.088***	-0.003	-0.014	1		
GDP_G	0.310***	-0.167***	-0.202***	-0.031**	-0.142***	-0.207***	-0.315***	0.017	-0.065***	-0.051***	0.126***	0.045***	1	
Inf	0.410***	-0.250***	-0.200***	-0.032**	-0.169***	-0.209***	-0.303***	-0.004	-0.004	0.016	0.143***	-0.067***	0.543***	1

Note: DAC = Absolute discretionary accrual; CC = Control of corruption; RL = Rule of law; PS = Political stability; RQ = Regulatory quality; GE = Government effectiveness; VA = Voice and accountability; lnFirmSize = Natural log of firm size; Lev = Leverage; ROA = Return on assets; Sales_G = Sales growth; Aud_Q = Audit quality; GDP_G = Gross domestic product growth; and Inf = Inflation. Significance stars (***) 1%, ** 5%, * 10%).

Variance Inflation Factor

Table 6 presents the variance inflation factor (VIF) diagnostics. The low VIF values across all explanatory variables indicate that multicollinearity is not a concern, consistent with accepted econometric thresholds (Gujarati & Porter, 2009; Wooldridge, 2010). Importantly, the institutional quality dimensions display limited overlap, suggesting that each captures a distinct governance mechanism rather than a single underlying construct, thereby allowing independent interpretation of their marginal effects on earnings management. Firm-level and macroeconomic controls similarly show no collinearity issues. Overall, the diagnostics confirm model stability and support the reliability of subsequent regression estimates.

Table 6: Variance Inflation Factor (VIF) and Tolerance Diagnostics

Variables	Tolerance	VIF
DAC	0.7023	1.4238
CC	0.8730	1.1455
RL	0.8510	1.1750
PS	0.6880	1.453
RQ	0.7814	1.2797
GE	0.6340	1.5772
VA	0.8511	1.1749
InFirmSize	0.9273	1.0783
Lev	0.9123	1.0961
ROA	0.7431	1.3457
Sales_G	0.8673	1.153
Audit_Q	0.7620	1.3123
GDP_G	0.8200	1.2195
Inf	0.7652	1.3068

Note: DAC = Discretionary accrual, CC = Control of corruption; RL = Rule of law; PS = Political stability; RQ = Regulatory quality; GE = Government effectiveness; VA = Voice and accountability; InFirmSize = Natural log of firm size; Lev = leverage; ROA = Return on assets; Sales_G = Sales growth; Aud_Q = Audit quality; GDP_G = gross domestic product growth; and Inf = inflation.

Unit Root Tests

Table 7 presents the panel unit root results. The variables are non-stationary in levels but become stationary after first differencing, indicating integration of order one, I(1). This supports the appropriateness of the dynamic specification and justifies the use of the System-GMM estimator, thereby mitigating concerns of spurious regression. The Fisher-type statistics confirm significance across the cross-sectional dimension. Overall, the transformed series satisfy the stationarity conditions required for valid dynamic panel inference.

Table 7: Panel Unit Root Tests (ADF and PP)

Variables	ADF t-stat (Level)	Order	ADF t-stat (1st Diff)	Order	PP stat (Level)	Order	PP stat (1st Diff)	Order
DAC	-52.3	I(1)	-57.831	I(0)	3408.68	I(0)	7525.73	I(0)
CC	-61.509	I(1)	-52.471	I(0)	3066.37	I(0)	3504.48	I(0)
RL	-61.205	I(1)	-49.383	I(0)	2895.17	I(0)	2944.84	I(0)
PS	-67.172	I(1)	-59.993	I(0)	3528.37	I(0)	3624.93	I(0)
RQ	-17.431	I(1)	-41.08	I(0)	2444.24	I(0)	9469.73	I(0)
GE	-67.287	I(1)	-56.687	I(0)	3335.31	I(0)	3250.83	I(0)
VA	-46.727	I(1)	-41.787	I(0)	2440.23	I(0)	2419.1	I(0)
InFirmSize	-32.193	I(1)	-29.846	I(0)	1977.18	I(0)	2367.07	I(0)
Lev	-69.9	I(1)	-68.009	I(0)	4120.22	I(0)	10168.8	I(0)
ROA	-50.885	I(1)	-54.737	I(0)	3262.48	I(0)	6613.72	I(0)
Sales_G	-63.192	I(1)	-66.498	I(0)	3998.2	I(0)	16876.4	I(0)

Variables	ADF t-stat (Level)	Order	ADF t-stat (1st Diff)	Order	PP stat (Level)	Order	PP stat (1st Diff)	Order
Audit_Q	-4.703	I(1)	-4.587	I(0)	17.106	I(0)	17.487	I(0)
GDP_G	-62.256	I(1)	-46.927	I(0)	2943.66	I(0)	14970.8	I(0)
Inf	-48.308	I(1)	-40.317	I(0)	2515.21	I(0)	13980.6	I(0)

Note: DAC = Discretionary accrual, CC = Control of corruption; RL = Rule of law; PS = Political stability; RQ = Regulatory quality; GE = Government effectiveness; VA = Voice and accountability; lnFirmSize = Natural log of firm size; Lev = Leverage; ROA = Return on assets; Sales_G = Sales growth; Aud_Q = Audit quality; GDP_G = Gross domestic product growth; and Inf = Inflation.

Overall, the diagnostic results confirm the suitability of the dataset for panel estimation. Descriptive statistics indicate meaningful cross-sectional and temporal variation. Correlation and VIF tests show no multicollinearity concerns (Gujarati & Porter, 2009; Hair, Black, Babin, & Anderson, 2019). Unit root tests indicate I(1) processes that become stationary after first differencing, mitigating spurious regression concerns (Pesaran, 2004; Wooldridge, 2010). These diagnostics support the application of dynamic panel estimators in the subsequent analysis.

Panel Data Regression Analysis

This subsection evaluates the regression results by examining coefficient behavior, explanatory power, and model adequacy in line with the study's theoretical framework. Hypotheses are assessed based on the consistency and economic relevance of estimates across specifications.

Table 8 indicates satisfactory model performance. The fixed effects (FE) model explains a substantial proportion of the variation in earnings management ($R^2 = 0.681$), highlighting the importance of firm-specific heterogeneity. The pooled OLS model shows moderate explanatory power ($R^2 = 0.334$), while the F-statistics across POLS, FE, and RE estimations are highly significant, confirming the joint relevance of the regressors. The Hausman test ($\chi^2 = 40.21$; $p = 0.0000$) favors the FE specification, indicating correlation between unobserved firm effects and explanatory variables. Diagnostic tests reveal serial correlation (Durbin–Watson < 1) and significant cross-sectional dependence based on both the Breusch–Pagan LM and Pesaran CD tests ($p = 0.0000$), suggesting common shocks and dynamic persistence across countries. These features justify the use of robust dynamic estimators.

The system-GMM diagnostics support the validity of the dynamic specification. As expected, first-order serial correlation is present, while no second-order correlation is detected in differenced residuals (AR(2) $p = 0.0742$). Alternative lag restrictions produce stronger AR(2) outcomes without materially altering coefficients, reinforcing robustness. Instrument validity is confirmed by the Hansen J-statistic ($J = 137.78$; $p = 0.4413$), and the instrument count (rank = 184) remains appropriate relative to the sample size ($N = 245$), indicating no evidence of over-identification or instrument proliferation.

Consistent with dynamic panel methodology (Arellano & Bover, 1995; Blundell & Bond, 1998), the system-GMM framework effectively addresses endogeneity, unobserved heterogeneity, and potential reverse causality. Accordingly, subsequent hypothesis evaluation prioritizes the dynamic estimates as the most reliable representation of the institutional, firm-level, and macroeconomic determinants of earnings management.

Table 8 shows that control of corruption is a relevant institutional predictor of earnings management, but its effect is specification-dependent. In the static models, stronger anti-corruption environments are associated with lower discretionary accruals, consistent with Institutional Theory's argument that enforcement constrains managerial opportunism (Scott, 2014). However, the dynamic System-GMM estimates indicate a positive and significant association ($\beta = 0.0182$, $p < 0.01$), implying that formal anti-corruption reforms may not curb manipulation where enforcement credibility is weak. This pattern is consistent with institutional "decoupling," whereby rule adoption does not translate into effective constraint, and with Positive Accounting Theory's expectation that managers adapt reporting strategies under regulatory pressure (Watts & Zimmerman, 1986).

An alternative explanation for the positive association between control of corruption and earnings management relates to potential endogeneity arising from reverse causality and unobserved institutional characteristics. Countries experiencing persistent reporting irregularities may respond by strengthening anti-corruption initiatives, thereby creating a feedback relationship between governance reforms and financial reporting behaviour. In addition, anti-corruption measures may interact with broader institutional factors, such as judicial effectiveness, enforcement credibility, and regulatory capacity, which are difficult to fully isolate empirically. Although the dynamic System-GMM framework mitigates these concerns by addressing endogeneity and unobserved heterogeneity, the findings should nevertheless be interpreted with caution, as residual institutional interdependencies may still influence the estimated relationship.

This interpretation aligns with evidence that anti-corruption mechanisms reduce earnings manipulation only when backed by credible monitoring and enforcement capacity (Agyemang & Dzansi, 2022; Ghazwani et al., 2023). Where implementation is weak, reforms may have limited disciplining power, as reported in African settings by Okoye and Ijeoma (2022) and Tamba et al. (2023). Consistent with complementarity arguments, firm-level governance can mitigate corruption-related discretion; (Sudaryono, Nugroho, & Hapsari, 2024) show that stronger audit quality offsets such effects. Overall, the results suggest that anti-corruption policies alone are insufficient without enforcement depth and complementary governance mechanisms, providing only partial support for the hypothesis.

Table 8 indicates that the rule of law consistently constrains earnings management, with the dynamic specification revealing a significant negative effect ($\beta = -0.0155$, $p < 0.01$). This supports Institutional and Agency perspectives, which argue that credible legal enforcement and judicial independence increase the expected costs of opportunistic reporting and thereby limit managerial discretion (Jensen & Meckling, 1976; Scott, 2014). Strong legal systems, therefore, operate as effective external governance mechanisms.

The result aligns with cross-country evidence showing that robust legal environments reduce accrual manipulation and enhance reporting transparency (Ali et al., 2024; Mahmood, Abbas, et al., 2021). African studies similarly document that strengthened legal enforcement constrains earnings management, particularly in Nigeria and West Africa (Afolabi & Onifade, 2023; Oladimeji et al., 2024). Overall, the findings provide strong support for the hypothesis and reinforce the importance of judicial effectiveness in improving financial reporting quality across African capital markets.

Table 8 indicates that political stability is positively associated with earnings management ($\beta = 0.0291$, $p < 0.01$), contrary to the conventional expectation that stable political environments constrain opportunistic reporting. A plausible explanation, grounded in Agency Theory, Positive Accounting Theory, and Stakeholder Theory, is that politically stable environments often attract greater investor confidence and heighten expectations of sustained corporate performance. Under such conditions, managers may engage in earnings smoothing to maintain favourable performance perceptions, safeguard reputational capital, and avoid negative market reactions. Increased scrutiny from investors and other stakeholders in stable environments may further reinforce these incentives. This interpretation is consistent with evidence suggesting that the relationship between political conditions and earnings management is context-dependent. For example, Kariuki and Otieno (2022) and Tamba et al. (2023) report heightened discretionary reporting under politically stable conditions, whereas Ngoben and Makhoba (2023) find no consistent disciplinary effect of political stability. Similarly, Lakha et al. (2024) argue that the influence of political environments on reporting behaviour varies across institutional contexts. Overall, the findings suggest that political stability may not necessarily eliminate managerial discretion but may instead reshape the incentives underlying its exercise.

Overall, political stability does not automatically enhance reporting discipline; rather, its impact appears mediated by market incentives and performance pressures. The result indicates that stability must be complemented by effective enforcement mechanisms to constrain earnings manipulation, explaining the absence of support for the hypothesis in its predicted direction.

Table 8 indicates that regulatory quality is positively related to earnings management ($\beta = 0.0060$, $p < 0.05$), suggesting that improvements in regulatory design alone do not necessarily constrain opportunistic reporting. Consistent with Institutional Theory, formal rules exert limited disciplinary force when enforcement and monitoring capacity are weak (Scott, 2014). African evidence similarly highlights implementation gaps,

where strengthened regulatory frameworks have not consistently translated into improved reporting discipline (Okoye & Ijeoma, 2022; Tamba et al., 2023). Regulatory capture, as documented in South Africa (Chigbo & Nwachukwu, 2021), further weakens institutional effectiveness. Overall, the findings imply that regulatory reforms must be supported by credible enforcement to meaningfully reduce earnings manipulation, explaining the absence of support for the hypothesized negative relationship.

Table 8 shows that government effectiveness significantly reduces earnings management ($\beta = -0.0152$, $p < 0.01$), underscoring the importance of bureaucratic capacity in strengthening enforcement and limiting managerial discretion. This finding supports institutional perspectives that emphasize public sector efficiency as a key governance mechanism (Lakha et al., 2024) and aligns with evidence that effective administration enhances disclosure quality in developing and African markets (Ali et al., 2024; Tamba et al., 2023). Accordingly, the results provide strong support for the corresponding hypothesis.

Voice and accountability are negatively associated with discretionary accruals ($\beta = -0.0078$, $p < 0.05$), indicating that civic participation and media scrutiny enhance reporting discipline. This finding aligns with Stakeholder Theory (Freeman, 1984) and is consistent with evidence that stakeholder activism and transparency mechanisms constrain opportunistic reporting (Ali et al., 2024; Amin, 2021; Nkegbe & Moffatt, 2022). Overall, the result highlights the complementary role of informal accountability mechanisms alongside formal institutional structures in reducing earnings management across African capital markets.

Table 8 shows that firm size is positively related to earnings management ($\beta = 0.1796$, $p < 0.01$), indicating that larger firms may engage more in discretionary reporting due to greater operational complexity and performance pressures. This result is consistent with Agency and Positive Accounting theories, which suggest that managerial incentives intensify with organizational scale and contractual demands. The finding accords with recent evidence documenting higher accrual manipulation among large firms (Al-Shattarat, 2023; Alrobai et al., 2025; Nguyen & Nguyen, 2022; Ramadhani et al., 2024), thereby supporting the corresponding hypothesis. Leverage is positively and significantly associated with discretionary accruals ($\beta = 0.0142$, $p < 0.01$), indicating that debt covenant pressures intensify managerial incentives to manipulate earnings. This finding aligns with theoretical predictions that managers adjust reported performance to avoid contractual violations and is consistent with evidence linking higher leverage to increased earnings management (Al-Shattarat, 2023; Okoye & Akenbor, 2022; Ramadhani et al., 2024). Overall, the results underscore the influence of financial structure on opportunistic reporting behavior in African capital markets.

Table 8 shows that profitability is negatively associated with earnings management ($\beta = -0.0319$, $p < 0.01$), indicating that financially stronger firms have fewer incentives to manipulate reported earnings. This finding is consistent with incentive-based theories suggesting that stable performance reduces opportunistic behavior and aligns with evidence documenting lower accrual manipulation among profitable firms (Alrobai et al., 2025; Hadiza & Yahaya, 2024; Ozili, 2022). Accordingly, the results support the corresponding hypothesis.

Sales growth is positively and significantly related to discretionary accruals ($\beta = 0.0050$, $p < 0.01$), indicating that rapidly expanding firms face stronger performance pressures that may encourage earnings manipulation. This finding aligns with evidence that growth-oriented firms are more likely to manage earnings to sustain market confidence (Afolabi & Onifade, 2023; Ramadhani et al., 2024), thereby supporting the growth-related hypothesis. Audit quality is negatively and significantly associated with earnings management ($\beta = -0.0150$, $p < 0.01$), confirming the constraining role of external monitoring. This finding is consistent with governance literature emphasizing auditor effectiveness in enhancing reporting credibility and aligns with recent evidence (Amara, Ben Amar, & Jarboui, 2024; Bawuah, 2023; Hadiza & Yahaya, 2024). Overall, the result underscores the importance of audit oversight in limiting opportunistic reporting within African capital markets. Table 8 shows that GDP growth has no significant effect on earnings management ($\beta = 0.0004$, $p \approx 0.7010$), indicating that economic expansion alone does not influence discretionary reporting. The result suggests that macroeconomic volatility, rather than growth, shapes managerial incentives, consistent with evidence from emerging markets reporting limited earnings management responses to growth fluctuations (Nguyen, 2022; Tamba et al., 2023; Viana, Costa, & Pereira, 2023). Accordingly, the growth-related hypothesis is not supported. Inflation is positively and significantly associated with discretionary accruals ($\beta = 0.1394$, $p <$

0.01), indicating that price instability heightens earnings-smoothing incentives. This finding is consistent with evidence showing increased reporting manipulation in inflationary environments characterized by uncertainty and performance pressures (Bekele & Mensah, 2022; Mubiru & Odhiambo, 2023; Ndlovu & Kamau, 2024). The results highlight macroeconomic stability as an important complementary condition for strengthening financial reporting quality in African capital markets.

Table 8: Panel data regression results

Items Variable	Dependent variable: DAC Models: Jones (1991)			
	POLS	FEM	REM	SGMM
C	0.1211 (0.0177)***	0.1419 (0.0178)***	0.1598 (0.0169)***	-
CC	-0.1402 (0.0125)***	0.0142 (0.0121)	-0.0002 (0.0113)	0.0182 (0.0025)***
RL	0.1045 (0.0118)***	-0.0096 (0.0104)	0.0169 (0.0100)*	-0.0155 (0.0022)***
PS	0.1021 (0.0051)***	0.0134 (0.0079)*	0.0577 (0.0058)***	0.0291 (0.0017)***
RQ	-0.0314 (0.0110)***	0.0011 (0.0092)	-0.0132 (0.0087)	0.0060 (0.0027)**
GE	-0.0011 (0.0142)	0.0037 (0.0131)	-0.0291 (0.011855)**	-0.0152 (0.0036)***
VA	-0.0412 (0.0098)***	-0.0122 (0.0115)	-0.0339 (0.0092)***	-0.0078 (0.0033)**
InFirmSize	0.0392 (0.0877)	-0.0787 (0.0808)	-0.0568 (0.0786)	0.1796 (0.0368)***
Lev	-0.0240 (0.0166)	0.0219 (0.0139)	0.0175 (0.0136)	0.0142 (0.0029)***
ROA	-0.0081 (0.0140)	-0.0296 (0.0125)*	-0.0217 (0.0122)*	-0.0319 (0.0023)***
Sales_G	0.0429 (0.0049)***	0.0011 (0.0037)	0.0065 (0.0037)*	0.0050 (0.0013)***
Audit_G	-0.0163 (0.0044)***	0.0242 (0.0098)*	0.0026 (0.0074)	-0.0150 (0.0039)***
GDP_G	0.0054 (0.0007)***	0.0001 (0.0006)	0.0011 (0.0006)*	0.0004 (0.0001)
Inf	0.6625 (0.0433)***	0.0892 (0.0394)*	0.2188 (0.0379)***	0.1394 (0.0078)***
DAC	-	-	-	0.4580 (0.0030)***
Observations	4900	4900	4900	4410
R-Squared R ²	0.3338	0.6808	0.0378	-
F-statistic	188.3282	38.5342	14.7995	-
Prob(F-stat)	0.0000	0.0000	0.0000	-
Durbin-Wats.	0.6437	1.1014	0.9779	-
Hausman X2 Test	-	-	40.2057	-
P-Value X2 Test	-	-	0.0000	-
AR(1)	-	-	-	0.0000
AR(2)	-	-	-	0.0742
J-statistic	-	-	-	137.7769
Prob(J-statistic)	-	-	-	0.4413

Note: CC = Control of corruption; RL = Rule of law; PS = Political stability; RQ = Regulatory quality; GE = Government effectiveness; VA = Voice and accountability; InFirmSize = Natural log of firm size; Lev = leverage; ROA = Return on assets; Sales_G = Sales growth; Aud_Q = Audit quality; GDP_G = Gross domestic product growth; and Inf = Inflation. Significance stars (***) 1%, ** 5%, * 10%). The figure in brackets represents the standard error.

Overall, the findings support the integrated theoretical framework. Stronger institutional capacity, particularly rule of law, government effectiveness, and voice and accountability, consistently constrains earnings management, aligning with Institutional and Stakeholder perspectives. In contrast, the positive effects of firm size, leverage, and political stability reflect Agency and Positive Accounting predictions that managerial incentives and contractual pressures intensify opportunistic reporting. The mixed results for regulatory quality further suggest institutional decoupling, implying that formal reforms alone are insufficient to curb earnings manipulation without credible enforcement.

Summary of Hypotheses Testing Results

To facilitate interpretation and avoid repetition, Table 9 summarises the outcomes of the hypothesis tests based on the preferred dynamic System-GMM specification, which constitutes the ability to address endogeneity, unobserved heterogeneity, and earnings persistence.

Table 9: Summary of Hypotheses Testing Results (Based on System-GMM Estimates)

Hypothesis	Variable/Relationship	Expected Relationship	Empirical Finding	Hypothesis Outcome
H1	Control of Corruption → Earnings Management	Negative	Positive and significant	Not Supported
H1	Rule of Law → Earnings Management	Negative	Negative and significant	Supported
H1	Political Stability → Earnings Management	Negative	Positive and significant	Not Supported
H1	Regulatory Quality → Earnings Management	Negative	Positive and significant	Not Supported
H1	Government Effectiveness → Earnings Management	Negative	Negative and significant	Supported
H1	Voice and Accountability → Earnings Management	Negative	Negative and significant	Supported
H2	Firm Size → Earnings Management	Significant relationship	Positive and significant	Supported
H2	Leverage → Earnings Management	Significant relationship	Positive and significant	Supported
H2	Profitability (ROA) → Earnings Management	Significant relationship	Negative and significant	Supported
H2	Sales Growth → Earnings Management	Significant relationship	Positive and significant	Supported
H2	Audit Quality → Earnings Management	Significant relationship	Negative and significant	Supported
H3	GDP Growth → Earnings Management	Significant relationship	Statistically insignificant	Not Supported
H3	Inflation → Earnings Management	Significant relationship	Positive and significant	Supported

CONCLUSION

This study provides cross-country evidence on the institutional, firm-level, and macroeconomic determinants of earnings management among non-financial listed firms in African capital markets. Using a dynamic system-GMM framework to address endogeneity and persistence, the findings show that institutional capacity is a critical driver of reporting behavior. Stronger rule of law, government effectiveness, and voice and

accountability consistently constrain discretionary accruals, confirming the disciplinary role of credible legal systems, bureaucratic efficiency, and civic oversight in line with Institutional and Stakeholder theories.

In contrast, firm size, leverage, political stability, and inflation are positively associated with earnings management, supporting Agency and Positive Accounting predictions that contractual pressure, market scrutiny, and macroeconomic uncertainty intensify discretionary reporting incentives. The positive effect of regulatory quality further reveals institutional decoupling, suggesting that formal reforms without credible enforcement may fail to curb opportunistic behavior.

The study makes three key contributions. First, it positions institutional quality as a central explanatory determinant of earnings management rather than a peripheral control in emerging market research. Second, by disaggregating governance into distinct dimensions, it demonstrates that institutional effects are heterogeneous and enforcement-dependent. Third, the multi-country African evidence highlights how macro-institutional structures interact with firm characteristics to shape earnings quality across diverse governance environments. Policy implications are clear. Strengthening judicial independence, enforcement capacity, and civic accountability should take precedence over regulatory redesign alone. For firms, robust internal governance and audit oversight remain essential, particularly under economic volatility. Investors should incorporate institutional context into earnings quality assessments in emerging markets.

Beyond its impact on reporting quality, earnings management may impede sustainable development by encouraging inefficient resource allocation, weakening stakeholder confidence, and reducing the credibility of sustainability-related disclosures. Therefore, robust governance mechanisms and greater reporting transparency are essential for promoting sustainable corporate behaviour and long-term economic prosperity in African capital markets. This study is not without limitations. The reliance on accrual-based proxies may not capture real activity manipulation, and national governance indicators may mask subnational variations. Future research could incorporate alternative earnings measures, examine sectoral heterogeneity, and explore dynamic institutional reforms over time. Overall, the findings affirm that institutional strength is fundamental to financial reporting integrity in African capital markets and provide important theoretical and policy insights for enhancing transparency and investor confidence.

A further limitation relates to the use of a balanced panel dataset, which required the exclusion of firms with incomplete observations. Although this improves estimation reliability, it may introduce survivorship bias by underrepresenting firms that exited the market or exhibited persistent reporting deficiencies. Future research may extend the analysis using unbalanced panel designs to assess the sensitivity of the findings to sample selection effects.

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