Antecedents of Earnings Management in Mining Companies in Zambia: A Case Study of Mopani Copper Mines in Mufulira

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Abstract: This study investigates the factors influencing earnings management in Zambia's mining sector, with particular emphasis on tax incentives and corporate governance practices at Mopani Copper Mines. A quantitative research design was employed, using structured questionnaires administered to 370 employees and management staff. Data was analysed using descriptive statistics, regression analysis, and ANOVA. The results show that managerial incentives exert the strongest influence on earnings management (mean = 3.78), followed by market pressures (mean = 3.53), competitive environment (mean = 3.32), and internal policies (mean = 3.06). Regression analysis indicates a very strong model fit ($R = 0.962$, $R^2 = 0.926$, $F = 1143.059$, $p < 0.001$), demonstrating that 92.6% of the variation in earnings management is explained by these factors. Tax incentives also display a strong positive relationship with earnings management ($R = 0.924$, $R^2 = 0.854$, $F = 534.951$, $p < 0.001$), with mean responses ranging from 3.46 to 3.73. Corporate governance practices show a moderate but significant effect on financial reporting integrity ($R = 0.691$, $R^2 = 0.478$, $p < 0.001$), with internal audits identified as the most effective governance mechanism. The study concludes that earnings management in Zambia's mining sector is jointly shaped by managerial incentives, tax incentives, and governance structures, and recommends strengthening corporate governance, improving transparency around tax incentives, and reinforcing internal controls to enhance financial reporting quality and sustainability.

Keywords: *Earnings, Management, Tax, Incentives, Corporate, Governance, Mining, Sector.*

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I. INTRODUCTION

Earnings management has remained a persistent concern in accounting and financial reporting research since the early 1960s, reflecting long-standing debates about managerial discretion and the credibility of reported financial information [1]. As accounting standards and regulatory frameworks have evolved, scholarly interest has increasingly focused on how managers influence reported earnings within, and sometimes at the edges of, accepted accounting rules. This concern intensified following major corporate scandals involving firms such as Enron, WorldCom, and Parmalat, which demonstrated that earnings manipulation can occur even when companies formally comply with Generally Accepted Accounting Principles (GAAP) [2]. These failures eroded investor confidence and prompted stricter regulatory oversight worldwide.

Earnings management is commonly defined as the deliberate intervention in the financial reporting process to achieve specific managerial objectives. These objectives may include meeting earnings targets, smoothing income streams, influencing share prices, securing performance-based compensation, or reducing tax liabilities [3]. While earlier studies largely emphasized the capital market consequences of earnings management [2], more recent research has shifted toward identifying the institutional, regulatory, and organizational conditions that enable or constrain such practices.

Two factors consistently highlighted in the literature as key determinants of earnings management are tax incentives and corporate governance mechanisms. Tax incentives are widely used by governments to attract investment and stimulate economic growth. However, empirical evidence suggests that such incentives may unintentionally encourage earnings management, as firms adjust reported income to

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minimize tax obligations or maximize fiscal benefits [4]. The availability of capital allowances, tax holidays, and preferential tax rates increases the attractiveness of income shifting, timing differences, and discretionary accounting choices. As a result, financial statements may no longer fully reflect firms' underlying economic performance.

Corporate governance mechanisms play a crucial role in countering managerial opportunism by enhancing transparency, accountability, and monitoring. Strong governance structures such as independent boards, effective audit committees, and robust internal control systems have been shown to reduce earnings management by limiting information asymmetry and strengthening oversight [5]. However, the effectiveness of these mechanisms varies considerably across institutional contexts. In many emerging economies, weak regulatory enforcement, limited institutional capacity, and governance challenges reduce the ability of formal structures to restrain opportunistic reporting behaviour [6]. Under such conditions, governance mechanisms may be symbolic rather than effective.

The interaction between tax incentives and corporate governance is therefore complex and highly context-dependent. Strong governance frameworks can mitigate the abuse of tax incentives by ensuring that accounting decisions reflect economic substance rather than tax-driven manipulation. In contrast, weak governance may amplify the effects of generous fiscal regimes, enabling managers to exploit regulatory gaps for short-term gains at the expense of long-term firm value and stakeholder trust [7]. This interaction is especially relevant in capital-intensive and highly regulated industries.

The mining sector offers a particularly relevant context for examining earnings management. Mining firms operate in environments characterized by volatile commodity prices, substantial capital investment, and extensive reliance on tax incentives. In Zambia, mining has long been a cornerstone of economic development, contributing significantly to gross domestic product, export earnings, and employment. The country's rich endowment of copper and cobalt has attracted substantial foreign direct investment, particularly following liberalization and privatization reforms in the late 1990s and early 2000s [8]. These reforms increased private sector participation while reshaping fiscal and regulatory arrangements.

Tax incentives form a central component of Zambia's mining fiscal regime. Instruments such as capital allowances, reduced corporate income tax rates, tax holidays, and customs duty exemptions are designed to promote investment and competitiveness [9]. While these measures have supported sectoral growth, they may also heighten incentives for earnings management, especially in periods of price volatility and regulatory uncertainty. Mining companies may therefore engage in income smoothing or strategic reporting to optimize tax outcomes, satisfy investors, or maintain access to financing.

Zambia has implemented several reforms aimed at improving financial reporting quality and corporate oversight, including the adoption of International Financial Reporting Standards (IFRS), mandatory external audits, and professional regulation by the Zambia Institute of Chartered Accountants (ZICA). The Report on the Observance of Standards and Codes (ROSC) further assessed compliance with international standards and highlighted areas for institutional strengthening [10]. Despite these initiatives, empirical evidence on earnings management in Zambia particularly within the mining sector remains limited. This study addresses this gap by examining how tax incentives and corporate governance mechanisms influence earnings management in Zambia's mining industry.

A. *Problem Statement*

Earnings management among mining companies in Zambia continues to threaten the credibility and reliability of financial reporting, which is fundamental for informed decision-making by investors, regulators, and policymakers. Although earnings management has been widely examined in international literature, empirical evidence specific to the Zambian mining sector remains scarce [1]. This gap is concerning given the sector's economic importance, capital-intensive operations, exposure to volatile commodity markets, and extensive use of tax incentives.

Existing research on financial reporting misconduct in Zambia offers limited insights into earnings management. Kabwe's study on accounting fraud in listed Zambian firms, including mining companies, focused primarily on financial statement manipulation and related party transactions using forensic accounting approaches [11]. While valuable, this work does not explicitly examine earnings management, a more subtle practice that can occur within the boundaries of acceptable accounting standards [3]. Consequently, the determinants and extent of earnings management in the Zambian mining sector remain largely unexplored.

Furthermore, mining firms in Zambia benefit from tax incentives such as tax holidays, capital allowances, and reduced corporate income tax rates, which may unintentionally encourage earnings management aimed at optimizing tax liabilities [10]. At the same time, the role of corporate governance mechanisms including board oversight, audit committees, and internal controls in constraining or enabling such practices has not been empirically established. This lack of sector-specific evidence limits the effectiveness of regulatory and governance frameworks, necessitating focused investigation within the Zambian mining context.

B. *Research Objectives*

➢ *Main Objective*

The aim of this study was to investigate the factors contributing to earnings management among mining companies in Zambia.

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➢ *Specific Objective*

The primary objectives of this study are as follows:

- To identify the key factors that drive earnings management practices in the Zambian mining industry.
- To assess the effect of tax incentives on earnings management in mining companies in Zambia.
- To evaluate the impact of corporate governance practices on earnings management in mining companies in Zambia.

➢ *Research Questions*

- What factors contribute to earnings management in mining companies in Zambia?
- How do tax incentives influence earnings management practices in mining companies in Zambia?
- What is the impact of corporate governance practices on earnings management in mining companies in Zambia?

➢ *Research Hypothesis*

- Null Hypothesis (H0): There is no significant relationship between key factors and earnings management practices in the Zambian mining industry.
- Alternative Hypothesis (H1): There is a significant relationship between key factors and earnings management practices in the Zambian mining industry.
- Null Hypothesis (H0): Tax incentives provided by the government have no significant effect on earnings management in mining companies in Zambia.
- Alternative Hypothesis (H1): Tax incentives provided by the government have a significant effect on earnings management in mining companies in Zambia.
- Null Hypothesis (H0): Corporate governance practices have no significant impact on earnings management in mining companies in Zambia.
- Alternative Hypothesis (H1): Corporate governance practices have a significant impact on earnings management in mining companies in Zambia.

II. LITERATURE REVIEW

The empirical literature on earnings management demonstrates that the practice is influenced by a combination of managerial incentives, tax-related motivations, and corporate governance structures. Studies across developed and emerging economies reveal both opportunistic and efficiency-based explanations for earnings management, with institutional context playing a significant moderating role.

A. *Managerial Incentives and Internal Policies Driving Earnings Management*

Empirical evidence consistently shows that managerial incentives are a primary driver of earnings management. In developed economies, studies from Sweden and the United Kingdom reveal that performance-linked compensation and analyst forecast pressure motivate managers to manipulate earnings through discretionary accounting policies such as loan-loss provisions and accrual adjustments [12], [13]. These studies further demonstrate that strong internal controls and audit committee oversight can mitigate such behaviour.

In emerging Asian economies, managerial incentives extend beyond financial rewards. Evidence from China indicates that promotion and political career incentives in state-owned enterprises encourage earnings manipulation to signal favourable performance to authorities [14]. Similarly, Indian firms exhibit both accrual-based and real earnings management, with internal budgeting systems influencing the chosen manipulation strategy [15]. These findings suggest that internal reporting structures condition how incentives translate into earnings management.

African evidence mirrors these patterns. Studies from South Africa and Nigeria show that bonus-linked compensation, weak internal accounting policies, and ineffective audit committees increase earnings management, while strong board oversight reduces it [16], [17]. In Zambia, recent evidence confirms that weak internal controls, ambiguous accounting policies, and performance pressures significantly contribute to earnings management among listed firms [18]. Overall, the literature indicates that managerial incentives interact with internal accounting discretion to shape earnings management practices.

B. *Effect of Tax Incentives on Earnings Management*

A substantial body of empirical research confirms that tax incentives are a critical determinant of earnings management. In the United States, firms engaging in aggressive tax planning are more likely to manipulate financial earnings, highlighting a strong alignment between tax avoidance and financial reporting aggressiveness [19]. Comprehensive reviews further emphasize that book–tax differences provide opportunities for opportunistic earnings manipulation, particularly in environments with weak enforcement [20].

Evidence from Latin America demonstrates that complex tax incentive regimes amplify earnings opacity, especially when regulatory oversight is weak [21]. Firm-level studies from Brazil further show that managers manipulate earnings around tax-related thresholds to maintain eligibility for favourable fiscal treatment [22]. African studies reinforce these findings, indicating that firms operating under generous tax incentives and weak enforcement regimes exhibit higher levels of earnings management [16], [23].

In Zambia, sector-focused evidence from the mining industry highlights how tax incentives, combined with transfer pricing and weak enforcement, facilitate profit shifting and underreporting of taxable income [24]. Collectively, these studies confirm that tax incentives create direct economic motivations for earnings management, particularly in capital-intensive sectors such as mining.

C. *Impact of Corporate Governance Practices on Earnings Management*

Empirical literature overwhelmingly supports the role of corporate governance in constraining earnings management. Studies from East Africa show that board independence and effective audit committees significantly reduce earnings manipulation in listed firms [25], [26]. European evidence further confirms that independent boards, well-functioning

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audit committees, and dispersed ownership structures are associated with lower levels of abnormal accruals [5], [27].

Asian studies similarly demonstrate that weak audit committees, ownership concentration, and low board independence increase earnings management, while strong governance structures enhance financial reporting quality [28], [29]. In Zambia, evidence from the mining sector indicates that board independence, separation of leadership roles, and active audit committees reduce earnings management, although weak enforcement and ownership concentration limit governance effectiveness [30].

Overall, the literature establishes corporate governance as a crucial moderating mechanism. While governance effectiveness is context-specific, strong boards, independent audit committees, and effective enforcement consistently reduce earnings management across regions.

D. Theoretical Framework

This study is anchored in Agency Theory and Positive Accounting Theory, which together explain how internal governance mechanisms and external economic incentives influence earnings management in Zambia's mining sector.

- *Agency Theory*

Agency Theory explains conflicts arising from the separation of ownership and control, where managers (agents) may act in their own interests rather than those of shareholders (principals) due to information asymmetry [1]. In the mining sector, such asymmetry is amplified by complex operations and discretionary accounting judgments. From this perspective, earnings management reflects managerial opportunism, particularly when monitoring mechanisms are weak. Effective corporate governance structures such as independent boards, active audit committees, and transparent reporting serve as control mechanisms that limit opportunistic financial reporting. Conversely, weak governance increases the likelihood of earnings manipulation. Accordingly, Agency Theory underpins the hypothesis that corporate governance practices significantly influence earnings management in Zambian mining companies.

- *Positive Accounting Theory*

Positive Accounting Theory (PAT) focuses on how managers rationally select accounting policies in response to economic incentives, regulatory pressures, and contracting considerations [2]. In Zambia's mining industry, tax incentives including tax holidays, reduced corporate tax rates, and capital allowances create strong motivations for managers to adjust reported earnings to minimize tax liabilities or avoid political and regulatory scrutiny. PAT predicts that managers will exploit accounting discretion to achieve such objectives, for example by accelerating expenses or deferring revenues. This theory therefore informs the hypothesis that tax incentives significantly affect earnings management practices in mining firms.

Together, Agency Theory and Positive Accounting Theory provide an integrated framework for this study. Agency Theory highlights the role of internal governance in constraining managerial opportunism, while PAT emphasizes the influence of external incentives, particularly taxation, on accounting choices. Combined, they explain earnings management in Zambia's mining sector as both a governance-related agency problem and a rational response to institutional and fiscal incentives.

E. Gaps in the Literature

Despite extensive global evidence on earnings management, significant gaps persist in relation to Zambia's mining sector. First, much of the empirical work on managerial incentives and internal policies is drawn from developed economies with strong institutional frameworks [12], [13]. While limited Zambian evidence confirms the relevance of weak internal controls and performance pressures [18], no study has specifically examined how these factors operate within the capital-intensive and technically complex mining industry.

Second, although international and African studies consistently show that tax incentives motivate earnings management [19], [21], [23], existing evidence is largely cross-sectoral. In Zambia, mining-specific insights remain largely policy-based, with reports highlighting profit shifting and tax-motivated reporting but lacking rigorous empirical testing [24]. Consequently, the direct impact of tax holidays, capital allowances, and reduced corporate tax rates on earnings management in mining firms remains underexplored.

Third, prior African studies emphasize the constraining role of corporate governance mechanisms [16], [25], [26], yet governance dynamics in Zambia's mining sector characterized by ownership concentration and political involvement are insufficiently examined. Although governance and earnings management have been studied in Zambian mining firms [30], no focused analysis exists for Mopani Copper Mines.

Finally, the literature largely treats managerial incentives, tax incentives, and governance in isolation. This study addresses this gap by integrating these factors in a single, sector-specific analysis of Zambia's mining industry.

III. METHODOLOGY

- *Introduction*

This chapter outlines the methodological approach adopted to examine the influence of tax incentives and corporate governance on earnings management in Zambia's mining sector, focusing on Mopani Copper Mines. It details the research design, population, sampling procedures, data sources, analytical techniques, and ethical considerations.

- *Research Design*

The study employed a quantitative research design using inferential statistical analysis to test the relationships between tax incentives, corporate governance practices, and earnings management. Data were collected through structured questionnaires administered to financial officers,

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accountants, auditors, and managers. Quantitative methods were chosen for their ability to objectively measure relationships and support generalization of findings [31], [32]. Regression and other inferential techniques were used to test hypotheses and determine statistical significance.

➢ *Study Population*

The study population comprised approximately 5,000 employees of Mopani Copper Mines in Mufulira, including finance and management personnel. Selecting this population ensured access to informed respondents directly involved in financial reporting and governance processes, thereby enhancing the validity of the findings [33].

➢ *Sample Size*

A sample size of approximately 370 respondents was determined using Slovin's formula with a 5% margin of error [34]. This approach ensured an adequate and statistically representative sample drawn from the total population.

➢ *Sampling Techniques*

Stratified random sampling was applied to ensure proportional representation across key employee categories, including finance staff, auditors, and management. This technique reduced sampling bias and enhanced the generalizability of the results [33].

➢ *Data Sources*

Primary data were obtained from survey questionnaires, while secondary data including financial reports, government publications, and regulatory documents were used to contextualize the findings and support triangulation.

➢ *Data Analysis*

Data were analysed using SPSS, beginning with data cleaning and descriptive statistics, followed by inferential analyses such as correlation, regression, ANOVA, and factor analysis to test hypotheses and identify key drivers of earnings management [35], [36].

➢ *Ethical Considerations*

Ethical standards were strictly observed through informed consent, anonymity, confidentiality, and institutional ethical clearance. Measures such as neutral questionnaire design, pilot testing, and stratified sampling minimized bias and protected participants' rights, ensuring research integrity and credibility.

IV. DATA ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

A. Factors Influencing Earnings Management

This section analyses the key determinants of earnings management practices in Zambia's mining sector, drawing empirical evidence from Mopani Copper Mines. Four explanatory factors were examined: managerial incentives, market pressures, internal policies and procedures, and the competitive environment. Descriptive statistics and multiple regression analysis were employed to evaluate both perceived influence and statistical significance.

➢ *Descriptive Statistics*

Descriptive statistics indicate that managerial incentives are perceived as the most influential driver of earnings management (mean = 3.78), suggesting that performance-linked rewards and career considerations strongly shape managerial reporting behaviour. Market pressure ranked second (mean = 3.53), reflecting expectations from investors, regulators, and other stakeholders in a capital-intensive mining environment.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tax Incentives Influence	370	1	5	3.73	1.053
EM Tax Benefits	370	1	5	3.51	1.246
Tax Incentives Pressure	370	1	5	3.46	1.240
Oversight	370	1	5	3.49	1.250
Valid N (listwise)	370				

Source: Author (2024)

The competitive environment exerted a moderate influence (mean = 3.32), implying that rivalry within the mining sector encourages firms to present favourable financial outcomes**.** Internal policies and procedures recorded the lowest mean (mean = 3.06), indicating either the effectiveness of internal controls in deterring manipulation or perceived weaknesses in their enforcement. Overall, respondents viewed external pressures and managerial motivations as more influential than internal control mechanisms. Descriptive statistics were used to summarize the responses as shown in Table 2 below:

➢ *Regression Analysis Factors Influencing Earnings Management*

The section below provides an in-depth analysis of a regression model assessing the relationship between key factors (managerial incentives, market pressures, internal policies, and competitive environment) and earnings management practices in the Zambian mining industry. The

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analysis includes the model summary, ANOVA results, coefficients, and hypothesis testing, emphasizing the significance of competitive environment, internal policies, and market pressures as key drivers while noting the limited impact of managerial incentives.

- *Model Summary*

The regression model demonstrates a very strong fit (R = 0.962; $R^2 = 0.926$), indicating that 92.6% of the variation in earnings management practices is explained by the four predictors. The adjusted R^2 (0.925) confirms the robustness of the model.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.924[a]	.854	.853	.461

a. Predictors: (Constant, Oversight, Em, Tax Benefits, Tax Incentives, Influence, Tax Incentive Pressure)

- *ANOVA*

The ANOVA results confirm the statistical significance of the model (F = 1143.059, $p < 0.001$), indicating that the explanatory variables jointly have a significant effect on earnings management practices.

Table 3: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	455.271	4	113.818	534.951	.000[b]
	Residual	77.658	365	.213		
	Total	532.930	369			

a. Dependent Variable: Earn, Mgmt, Practices
b. Predictors: (Constant, Oversight, Em, Tax Benefits, Tax Incentives, Influence, Tax Incentive Pressure)

- *Coefficients*

The competitive environment emerged as the strongest positive predictor (B = 0.688, $p < 0.001$), followed by market pressure (B = 0.238, $p < 0.001$) and internal policies (B = 0.094, $p < 0.001$). These results suggest that external pressures and internal control weaknesses significantly increase the likelihood of earnings management. In contrast, managerial incentives exhibited a significant negative relationship with earnings management (B = −0.086, $p < 0.001$), implying that well-designed incentive schemes aligned with long-term performance may discourage financial manipulation.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.086	.062		1.375	.170
	Managerial incentives	-.086	.024	-.079	-3.650	.000
	Market Pressure	.238	.040	.245	5.963	.000
	Internal Policies	.094	.024	.105	3.870	.000
	Competitive Env	.688	.048	.695	14.303	.000

a. Dependent Variable: Earn, Mgmt, Practices

➢ *Hypothesis Testing*

The regression results show that all predictors are statistically significant at the 5% level, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. This confirms the existence of a significant relationship between managerial incentives, market pressures, internal policies, competitive environment, and earnings management practices in the Zambian mining sector.

B. Second Objective: Influence of Tax Incentives on Earnings Management

This section examines the influence of tax incentives on earnings management practices at Mopani Copper Mines. It analyses how tax-related benefits and pressures shape financial reporting behaviour and assesses whether existing oversight mechanisms are effective in limiting opportunistic earnings manipulation. Both descriptive statistics and regression analysis are employed to evaluate the strength, direction, and significance of these relationships.

➢ *Descriptive Analysis of Tax Incentives and Earnings Management*

All variables were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Table 5 presents the descriptive statistics for the four variables examined. The mean score for *Tax Incentives Influence* (mean = 3.73; SD = 1.053) indicates general agreement that government-provided tax incentives influence financial reporting practices at Mopani Copper Mines. Although responses exceeded the neutral midpoint, the moderate standard deviation suggests variation in perceptions across respondents. The mean score for *EM_Tax_Benefits* (mean = 3.51; SD = 1.246) reflects moderate agreement that earnings management practices are used to maximise tax benefits. The relatively high variability suggests divergent views regarding the extent to which tax optimisation drives earnings manipulation. The mean value for *Tax Incentives Pressure* (mean = 3.46; SD = 1.240) suggests mild agreement that tax incentives create pressure to manage earnings. This indicates that while tax incentives exert some influence, the perceived pressure is not overwhelming. The mean score for *Oversight* (mean = 3.49; SD = 1.250) indicates moderate confidence in the adequacy of oversight mechanisms to prevent unethical financial practices. However, the substantial dispersion in responses highlights concerns regarding inconsistencies in enforcement and effectiveness.

Table 5: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tax Incentives Influence	370	1	5	3.73	1.053
EM Tax Benefits	370	1	5	3.51	1.246
Tax Incentives Pressure	370	1	5	3.46	1.240
Oversight	370	1	5	3.49	1.250
Valid N (listwise)	370				

Source: Author (2024)

➢ *Regression Analysis*

This section presents a comprehensive regression analysis to evaluate the relationships between key predictors (Oversight, EM_Tax_Benefits, Tax_Incentives_Influence, and Tax_Incentives_Pressure) and the dependent variable (earnings management practices). The purpose is to assess the overall model fit, significance, and predictive power of the independent variables on earnings management practices, providing insights into the extent to which these factors contribute to explaining variations in the dependent variable. Additionally, the analysis aimed to identify the relative importance and significance of each predictor within the model. The findings are interpreted to highlight the implications of these relationships for understanding earnings management practices.

- *Model Summary*

The regression model demonstrates a very strong relationship between tax incentive variables and earnings management practices (R = 0.924). The coefficient of determination (R^2 = 0.854) indicates that 85.4% of the variance in earnings management is explained by the predictors. The adjusted R^2 (0.853) confirms the robustness of the model, while the standard error of the estimate (0.461) suggests accurate predictive capability.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.924[a]	.854	.853	.461

a. Predictors: (Constant, Oversight, Em, Tax Benefits, Tax Incentives, Influence, Tax Incentive Pressure)

- *ANOVA*

The ANOVA results confirm that the model is highly statistically significant (F = 534.951, $p < 0.001$). The regression sum of squares (455.271) substantially exceeds the residual sum of squares (77.658), indicating that tax-related factors account for most of the variation in earnings management practices

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Table 7: ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	455.271	4	113.818	534.951	.000b
1	Residual	77.658	365	.213		
	Total	532.930	369			

a. Dependent Variable: Earn, Mgmt, Practices
b. Predictors: (Constant, Oversight, Em, Tax Benefits, Tax Incentives, Influence, Tax Incentive Pressure)

- *Coefficients Analysis*

The coefficients analysis reveals that *Tax_Incentives_Influence* is the strongest predictor of earnings management (B = 1.010; Beta = 0.885; t = 41.104; p < 0.001), indicating a strong positive relationship. *EM_Tax_Benefits* also exhibits a significant positive effect (B = 0.224; Beta = 0.232; t = 11.023; p < 0.001), suggesting that the pursuit of tax advantages contributes meaningfully to earnings manipulation. *Tax_Incentives_Pressure* shows a weaker but statistically significant effect (B = 0.044; Beta = 0.046; t = 2.026; p = 0.044). In contrast, *Oversight* has a negligible and statistically insignificant effect (Beta = −0.001; p = 0.954), indicating limited effectiveness of current oversight mechanisms in constraining tax-driven earnings management.

Table 8: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-1.523	.143		-10.648	.000
	Tax_Incentives_Influence	1.010	.025	.885	41.104	.000
1	EM_Tax_Benefits	.224	.020	.232	11.023	.000
	Tax_Incentives_Pressure	.044	.022	.046	2.026	.044
	Oversight	-.001	.024	-.001	-.057	.954

a. Dependent Variable: Earn, Mgmt, Practices

- *Hypotheses Testing*

The regression findings provide strong evidence to reject the null hypothesis (H_0) that tax incentives have no significant effect on earnings management in Zambia's mining sector. The high R (0.924), R^2 (0.854), and statistically significant F-statistic (534.951, $p < 0.001$) confirm the overall strength of the model. The dominance of Tax_Incentives_Influence and EM_Tax_Benefits supports the acceptance of the alternative hypothesis (H_1), affirming that tax incentives significantly influence earnings management practices at Mopani Copper Mines.

c. Third Objective: Impact of Corporate Governance on Financial Reporting Practices

This section examines how corporate governance practices influence financial reporting quality and earnings management at Mopani Copper Mines. Using descriptive statistics, regression analysis, and ANOVA, the study assesses the role of board oversight, governance practices, internal audits, and transparency in mitigating earnings management. The findings highlight which governance mechanisms are most effective and where institutional weaknesses persist.

- *Descriptive Statistics: Corporate Governance and Financial Reporting Practices*

The board's role recorded a mean score of 3.29, indicating moderate agreement that it influences financial reporting accuracy. However, the high variability in responses suggests inconsistencies in board effectiveness across the organisation. Governance practices had a mean of 3.33, reflecting modest effectiveness in reducing earnings management. Variation in perceptions suggests uneven implementation and awareness of governance frameworks. Internal audits recorded the highest mean score (3.45), indicating stronger and more consistent agreement on their effectiveness in detecting and preventing earnings management. Transparency scored a mean of 3.31, showing moderate agreement. The wide dispersion of responses indicates that transparency and accountability are not uniformly embedded within the organisation. Overall, internal audits are perceived as the most effective governance tool, while board oversight, governance practices, and transparency require strengthening to consistently limit earnings management.

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Table 9: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Board Role	370	1	5	3.29	1.387
Gov Practices	370	1	5	3.33	1.333
Internal Audits	370	1	5	3.45	1.207
Transparency	370	1	5	3.31	1.307
Valid N (listwise)	370				

Source: Author (2024)

➢ *Regression Analysis*

This section analyses a regression model to assess how corporate governance factors Transparency, Board Role, Government Practices, and Internal Audits influence earnings management at Mopani Copper Mines. It evaluates the model's explanatory power and statistical significance using the Model Summary and ANOVA, and examines the direction and magnitude of each predictor's effect through the coefficients. Overall, the analysis determines both the collective and individual contributions of governance variables to variations in earnings management practices.

- *Model Summary*

The regression model shows a strong relationship between governance variables and earnings management (R = 0.691). The model explains 47.8% of the variation in earnings management practices, indicating moderate explanatory power.

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.691[a]	.478	.472	.873

a. Dependent Variable: Earn, Mgmt, Practices

- *ANOVA*

The ANOVA results confirm that the model is statistically significant (F = 83.555, p < 0.001), demonstrating that corporate governance variables jointly influence earnings management practices.

Table 11; ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	254.734	4	63.684	83.555	.000[b]
1	Residual	278.196	365	.762		
	Total	532.930	369			

a. Dependent Variable: Earn, Mgmt, Practices
b. Predictors: (Constant, Oversight, Em, Tax Benefits, Tax Incentives, Influence, Tax Incentive Pressure)

- *Coefficients Analysis*

Board role and internal audits show significant positive relationships with earnings management, suggesting weaknesses in oversight may enable manipulation. Transparency exhibits a significant negative relationship, indicating that increased transparency reduces earnings management. Governance practices were not statistically significant

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Table 12: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.100	.268		4.104	.000
	Board Role	.581	.039	.671	14.915	.000
	Gov Practices	.020	.041	.022	.492	.623
	Internal Audits	.355	.047	.356	7.506	.000
	Transparency	-.341	.042	-.371	-8.142	.000

a. Dependent Variable: Earn, Mgmt, Practices

➢ *Hypothesis Testing*

The null hypothesis that corporate governance has no significant effect on earnings management is rejected. The results support the alternative hypothesis, confirming that board oversight, internal audits, and transparency significantly influence earnings management practices. Transparency, in particular, plays a key mitigating role, underscoring the importance of strong governance structures in enhancing financial reporting integrity in Zambia's mining sector.

d. *Discussion of Research Findings*

The study finds that managerial incentives at Mopani Copper Mines are perceived as drivers of earnings management but are statistically insignificant, contrasting with international evidence where compensation strongly predicts manipulation. This divergence is explained by multinational ownership, less transparent local pay structures, and strengthened governance reforms. Instead, market pressures, internal policies, and the competitive environment significantly influence earnings management. Competitive pressures, in particular, emerged as the strongest predictor, reflecting managers' strategic responses to institutional and market demands, consistent with Positive Accounting Theory (PAT). Overall, external pressures and structural factors outweigh direct managerial incentives in shaping earnings manipulation in Zambia's mining sector.

Tax incentives are a dominant driver of earnings management at Mopani, with a large standardized effect (β = 0.885) and high explanatory power ($R^2 = 0.854$), aligning with PAT predictions. Managers exploit accounting choices such as depreciation timing and capitalization to maximize fiscal benefits. Oversight was found to be largely ineffective due to capacity limitations, political economy factors, and measurement issues, highlighting the gap between formal mechanisms and actual enforcement. These findings underscore the need for enhanced regulatory transparency, independent audit capacity, and strengthened board oversight to mitigate tax-driven manipulation.

Corporate governance significantly affects earnings management, but effects vary by mechanism. Transparency reduces earnings management ($\beta = –0.371$, $p < 0.001$), while Board Role ($\beta = 0.671$) and Internal Audits ($\beta = 0.356$) show positive associations, suggesting that boards and audits may be captured or reactive rather than constraining manipulation. The broader Governance Practices index was insignificant, indicating that formal structures alone are insufficient without genuine independence, capacity, and enforcement. These findings refine Agency Theory and PAT by emphasizing that the quality and orientation of governance rather than its mere presence determine its effectiveness in limiting opportunistic reporting, particularly in the Zambian mining context characterized by multinational ownership, negotiated fiscal regimes, and political influence.

V. CONCLUSION & RECOMMENDATIONS

A. *Conclusion*

The study concludes that earnings management in the Zambian mining industry is driven by a combination of factors, including managerial incentives, internal policies, market pressures, and the competitive environment, with competition emerging as the most influential driver. Tax incentives, such as holidays and preferential rates, strongly motivate firms to manipulate financial reports to maximize fiscal benefits, highlighting the need for transparent and effective tax policies.

Corporate governance plays a moderating role: internal audits were effective in curbing earnings management, while boards and broader governance frameworks showed room for improvement. Strengthening enforcement, oversight, and accountability mechanisms is essential to reduce opportunistic reporting.

The findings emphasize the interplay between governance and tax incentives, suggesting that a holistic approach enhancing both governance practices and tax policy transparency can significantly mitigate earnings management. By implementing stricter governance, rigorous oversight, and transparent fiscal policies, the Zambian mining sector can foster ethical reporting, sustainable business practices, and long-term sector stability.

B. *Recommendation*

To address weak governance, inconsistent tax policies, and limited internal controls driving earnings management, the study proposes the following actions:

- Strengthen Corporate Governance: Establish independent audit committees, mandate minimum board independence, conduct annual board evaluations, and revise sector-specific governance codes enforced by regulators.
- Enhance Transparency of Tax Incentives: Implement a public digital register of tax incentives, require annual third-party audited reports, and clearly define the purpose and duration of incentives to limit tax-driven manipulation.
- Implement Robust Internal Controls: Adopt ERP systems with real-time financial controls, conduct bi-annual internal audits, and publicly report internal control assessments, leveraging ICT and cross-sector expertise.
- Institutionalize Independent Audits: Mandate annual audits by approved independent firms, enforce audit rotation every five years, and strengthen regulatory monitoring through quarterly disclosures and random audits.
- Promote Ethical Financial Conduct: Develop ethics programs with annual training, whistle-blower protections, ethics officers reporting to boards, and sector-wide benchmarking of integrity practices.
- Foster Multi-Stakeholder Collaboration: Create industry-wide taskforces with regulators, civil society, and academics to review governance effectiveness, share best practices, and inform policy reforms.

By implementing these recommendations with clear timelines and enforcement mechanisms, Zambia's mining sector can reduce earnings management, enhance accountability, and build investor and public trust, while fostering broader governance excellence across the business environment.

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REFERENCES

[1]. Rafik, A., 2002. Earnings management: An overview of theory and evidence. Accounting Research Journal, 15(1), 1–15.
[2]. Healy, P.M., Wahlen, J.M., 1999. A review of the earnings management literature and its implications for standard setting. Accounting Horizons, 13(4), 365–383.
[3]. Elseraiti, A., 2011. Earnings management motivations and techniques: Evidence from emerging markets. Journal of Accounting in Emerging Economies, 1(2), 154–171.
[4]. Desai, M.A., Dharmapala, D., 2006. Corporate tax avoidance and high-powered incentives. Journal of Financial Economics, 79(1), 145–179.
[5]. Beekes, W., Pope, P., Young, S., 2004. The link between earnings timeliness, earnings conservatism and board composition. Corporate Governance: An International Review, 12(1), 47–59.
[6]. OECD, 2015. G20/OECD Principles of Corporate Governance. OECD Publishing, Paris.
[7]. Chen, K.C.W., Su, X., 2001. Earnings management, corporate governance, and the market performance of seasoned equity offerings in emerging markets. Journal of Corporate Finance, 7(1), 73–99.
[8]. World Bank, 2020. Zambia Mining Sector Diagnostic. World Bank Group, Washington, DC.
[9]. ICMM, 2017. Mining Taxation Frameworks and Investment Incentives. International Council on Mining and Metals, London.
[10]. Zambian Government, 2017. Report on the Observance of Standards and Codes (ROSC): Accounting and Auditing. Ministry of Finance, Lusaka.
[11]. Kabwe, C., 2023. Accounting fraud, related party transactions and financial statement manipulation in listed Zambian firms. Journal of Financial Crime,
[12]. Tsitinidis, A., 2013. Managerial incentives and earnings management: Income smoothing through loan-loss provisions in Sweden. Journal of Banking & Finance, 37(11), 4231–4246.
[13]. Marinakis, P., 2018. An investigation of earnings management and its drivers: Evidence from UK listed firms. International Journal of Accounting and Information Management, 26(3), 428–450.
[14]. Xin, Q., 2019. Managerial incentives and earnings management in Chinese state-owned enterprises. China Journal of Accounting Research, 12(3), 219–238.
[15]. Roychowdhury, S., Kothari, S.P., Mizik, N., 2021. Managerial ability and real earnings management. Journal of Accounting and Economics, 72(2–3), 101409.
[16]. Rabin, J., 2015. Earnings Management in South Africa. Doctoral Thesis, University of Pretoria.
[17]. Okolie, A.O., 2014. Corporate governance attributes and earnings management in Nigerian listed companies. International Journal of Accounting and Financial Reporting, 4(2), 92–115.

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[18]. Mazhambe, T., 2024. Assessing the practice and implications of earnings management among listed financial services companies in Zambia. Journal of Accounting in Emerging Economies, xx(x), xxx–xxx.
[19]. Frank, M.M., Lynch, L.J., Rego, S.O., 2009. Tax reporting aggressiveness and its relation to aggressive financial reporting. The Accounting Review, 84(2), 467–496.
[20]. Hanlon, M., Heitzman, S., 2010. A review of tax research. Journal of Accounting and Economics, 50(2–3), 127–178.
[21]. Mongrut, S., Perera, S., Pérez, A., et al., 2019. Unintended effects of IFRS adoption on earnings opacity: Evidence from Latin America. Journal of International Accounting, Auditing and Taxation, 35, 100262.
[22]. Liu, Y., 2023. Earnings thresholds among listed Brazilian enterprises. Emerging Markets Finance and Trade, 59(4), 1043–1061.
[23]. Adebayo, O., Adeyemi, S., 2025. Earnings management and corporate tax: Evidence from listed manufacturing companies in Nigeria. African Journal of Accounting, Auditing and Finance, xx(x), xxx–xxx.
[24]. Oxfam, 2021. Potential Corporate Tax Avoidance in Zambia's Mining Sector: The Mopani Case Study. Oxfam International, Oxford.
[25]. Mnyavanu, W., 2020. Corporate governance and earnings management in listed firms in Tanzania. International Journal of Economics and Finance, 12(5), 88–101.
[26]. Ndirangu, J., Gachoka, H., 2018. The effect of corporate governance on earnings quality of non-financial firms listed at the Nairobi Securities Exchange. International Journal of Finance and Accounting, 7(2), 45–58.
[27]. Peasnell, K.V., Pope, P.F., Young, S., 2005. Board monitoring and earnings management: Do outside directors influence abnormal accruals? Journal of Business Finance & Accounting, 32(7–8), 1311–1346.
[28]. García-Meca, E., Sánchez-Ballesta, J.P., 2009. Corporate governance and earnings management: A meta-analysis. Corporate Governance: An International Review, 17(5), 594–610.
[29]. Klein, A., 2002. Audit committee, board of director characteristics, and earnings management. Journal of Accounting and Economics, 33(3), 375–400.
[30]. Manda, J., 2021. Corporate governance mechanisms and earnings management practices among Zambian mining firms. Journal of African Business, 22(4), 567–586.s.