

## **THE EFFECTS OF FIRM ATTRIBUTES ON EARNINGS MANAGEMENT OF QUOTED CEMENT COMPANIES IN NIGERIA**

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### **Abstract**

This study evaluated certain firm attributes (proxied by firm size and audit quality) on earning management of listed cement firms in Nigeria. Secondary data was extracted from annual financial statement. A quantitative research design was adopted in the study. The population of the study comprises of all the cement firms listed on Nigerian stock exchange as at 31<sup>st</sup> December, 2021. As December 31<sup>st</sup>, 2021, there are 3 listed cement firms in Nigeria: Dangote Cement Plc, BUA cement Plc and Lafarge Africa Plc. The idea behind sampling is to ascertain an adequate size that will represent the total population thereby saving costs and time wastage. The outcome of the study justified firm size (SIZE) has a positive and insignificant relationship with earnings management of listed cement firms ( $\beta = 0.0093$ ,  $t = 1.44$ ,  $p = 0.168$ ). In addition, the study established that audit quality (AQ) negatively and significantly effects on earnings management of listed cement firms in Nigeria ( $\beta = -0.0049$ ,  $t = -2.40$ ,  $p = 0.027$ ). The study recommended that the listed cement firms in Nigeria should consistently engage the services of big4 audit firms have a very huge incentive to maintain a high audit quality which assist in checkmating the operations of the managers and limit the instance of earnings management.

**Keywords:** Audit quality earnings management, financial performance and firm size.

## **1.0 Introduction**

Financial information is included in financial statements for a company's internal and external stakeholders. The outcomes of a company's operations for a specific period are represented by the earnings recorded in its financial statements (Shoaib & Siddiqui, 2020). Earnings management arises when managers manipulate financial reports using their discretion in financial reporting and transaction structuring, either to deceive stakeholders about the company's true economic performance or to influence the terms of contracts that depend on the accounting figures. Firm traits (such as leverage, firm size, age, growth, cash flow) have been acknowledged in the literature as a vital component effective in mitigating earnings management (El-Diri, et al., 2020). According to Abdullahi (2016), firm elements or characteristics are distinct information reported in a financial statement of a firm that informs stakeholders about the performance of the firm and elucidates variations in earnings management activity. Organizational features, including demographic characteristics (age), structural characteristics (leverage and firm size), and performance characteristics (profitability, growth, and liquidity), may have an impact on earnings management.

The theoretical foundation of the nexus between firm components or characteristics on earnings management is rooted in the agency theory of the firm, which elucidates the conflicts of interest and information asymmetries between managers and owners (Jensen & Meckling, 1976). A company's manager manipulates earnings in a manufacturing firm through various tactics: providing unusually generous terms, cutting optional expenses to boost reported income, and producing excess production to artificially lower the cost of goods sold. While these actions may improve financial statements in the short term, they negatively impact the company's cash flow. Consequently, the inherent qualities of a firm are crucial in mitigating conflicts between management and shareholders, as well as reducing information disparities. These characteristics are thus vital factors in determining a company's overall performance and long-term success.

Several attempts have been made in the literature to examine the nexus between firm elements and earnings management with contrasting results. For instance, Cudia, et al., (2020) found that firms size, leverage, profitability are positively related to earnings management which indicates that larger and profitable companies engage in earning management while Hasnan, et al., (2020) demonstrated that firms with improved performance do not engage in financial restatement and firm leverage increases the management incentive to manipulate earnings. Das *et al* (2018) established high-growth and profitable enterprises with high debt and affiliated with business group indulge in earnings management whereas older and larger firms are engage in less earnings management: Khan *et al* (2016) concluded that managers of highly levered firms are more likely to take up opportunistic EM than those of low levered firms and larger firm with growth opportunity indulge in earning management, Bouaziz, *et al* (2020) showed that larger firm and older firms are less likely to manipulate accounting result while profitable firms and firms with high debt engage in earning management.

However, evidence available in Nigeria indicated that studies have focused on the relationship between corporate governance and earnings management (Obigbemi et al., 2016; Asogwa *et al*, 2019; Abubakar, et al., 2020), between audit committee attributes and earnings management

(Ayemere & Afensimi, 2015, Ibrahim, et al., 2015; Ojugbeli, 2018; Alhassan, et al., 2019) while the study of Olusola & Abdulaziz (2020) evaluated the link between firm characteristic and financial restatement while Farouk, et al., (2019) investigated the relationship between firm traits and financial reporting quality. However, studies on the relationship between firm characteristics and earnings management are limited. The closely related documented works in the literature is study conducted by Olowokure, et al., (2016) and Kwanbo & Anyalewechi (2021) which investigates the role of corporate governance (proxied by proxied by firm size and age, leverage, board size, gender and independence, and managerial ownership) on earning management of Nigeria deposit money banks. Regarding the relationship between company characteristics and earnings management of listed cement firms in Nigeria, this study would resolve some crucial questions. Therefore;

- i. What is the effect of firm's size on earnings management of quoted cement firms in Nigeria?
- ii. What is the effect of audit quality on earnings management of quoted cement firms in Nigeria?

The study principal objective is to determine how company characteristics affect the earning management of publicly traded cement companies in Nigeria. In light of this, specific aims are to:

- i) Appraise the influence of firm size on earnings management of quoted cement firms in Nigeria
- ii) Examine the role of audit quality on earnings management of quoted cement firms in Nigeria.

## **2.0 Literature Review**

According to Hasnan et al. (2020), managers of profitable companies will distort the financial data at their disposal to maintain their positions and increase their salary levels. As a result, companies that do better tend to control their earnings and smooth their financial records in order to declare lesser profits so that they can take advantage of tax benefits (Waweru and Riro, 2013). On the other side, managers of companies with lesser profitability could feel pressured to fudge earnings in order to avoid alerting the capital market to negative earnings surprises that could have a large impact on the market-based performance of the company (Ajay & Madhumathi, 2015). When a company's performance is poor, it usually adopts income-increasing strategies or manages earnings upward.

### **Firm Size**

According to the finance literature, firm size is one of the business characteristics that may help or hinder earnings management. It also acts as a benchmark for investors when deciding which investments to make (Githaiga et al., 2022). According to Watts and Zimmerman's (1978) positive accounting theory, major businesses use earnings management techniques to inflate their reported profits because they attract more public attention than smaller businesses (Watts & Zimmerman, 1986). Also, large firms choose accounting policies that permit postponing the earnings disclosure to future periods. Similarly, based on agency cost theory, large-sized firms witness greater agency costs which give room for more opportunistic practices (Jensen &

Meckling, 1976). Furthermore, larger firms also have more bargaining power over auditors, then tend to successfully waive earnings management in financial reports (Nelson et al., 2002).

### **Audit Quality**

As better auditing provides better assurance of higher quality financial reporting, audit quality is a constant framework that ensures financial reporting quality (DeFond & Zhang, 2014). DeAngelo (1981) defines audit quality as the market-perceived probability that an auditor will both discover and report financial statement irregularities. The US Government Accountability Office (GAO, 2015) further characterizes a quality audit as one conducted Generally Accepted Auditing Standards (GAAS), providing reasonable assurance that financial statements and related disclosures comply with Generally Accepted Accounting Principles (GAAP) and are free from material misstatements due to errors or fraud. DeFond & Zhang (2014) argue that higher audit quality enhances stakeholder confidence in financial statements, as it increases the likelihood that these statements accurately reflect a company's underlying economic reality within the constraints of its financial reporting system and inherent characteristics.

### **Earnings Management**

To meet internal organizational goals, external customer expectations, the need for income smoothing and window dressing for loan or initial public offering purposes, increase stock price, and lobby for government subsidies, managers engage in earnings management practices (Subramanyam, 2014). The ability of managers to approximate and forecast accounting statistics that might not accurately reflect a company's actual economic environment is made possible by the flexibility of accounting standards (Arun, et al., 2015). Earnings management is intended to deceive stakeholders about the company's true economic performance or to sway the results of contracts that rely on disclosed accounting data (Shadrach & Yakura, 2021). Companies engage in earnings manipulation to cover up financial reporting that differs from actual performance (Price & Sun, 2017). Earnings management decreases corporate value, generates stockholder, investor, and other partner misfortune, and intensifies regulatory authority monitoring and activist scrutiny (Price & Sun, 2017). To maximize company value, boost corporate managers' income and job security, prevent unpleasant earnings surprises, and avoid reporting losses and declining earnings, executives are incentivized to manipulate results (Healy & Wahlen, 1999; Park & Shin, 2018).

### **Empirical Review**

Pharm et al. (2022) investigated the relationship between corporate governance and earnings management in Vietnam's non-financial sector. Their study examined 658 listed companies from 2015 to 2019, using board size, independence, CEO duality, and managerial ownership as proxies for corporate governance, while discretionary and non-discretionary accruals represented earnings management. Employing a fixed effect estimation technique, they found that larger boards, more independent boards, and higher audit quality (particularly Big 4 auditors) were associated with reduced earnings management practices. Conversely, the study revealed that larger firms and those with better financial performance were more likely to engage in earnings management, possibly to maintain their market image and demonstrate sustainable corporate value. These findings suggest a complex interplay between governance structures, firm characteristics, and financial reporting practices in Vietnamese companies.

Kargi and Zakariya (2021) examined the interlinkage amongst free cash flow, managerial ownership and earnings management (proxied by discretionary accruals) for 6 conglomerate firms in Nigeria spanning 2005 and 2017. The empirical finding of the study revealed that free cash flow and firm size induce earnings management practices while managerial ownership reduces the manipulation of financial information by managers through effective monitoring.

Bouaziz et al., (2020) analyze the impact of CEO (proxied by firms' size, leverage, age, market-to-book and performance) on earnings management (proxied by discretionary accruals) of 151 listed French enterprises covering 2006 and 2015. The result of the feasible generalized least squares approach disclosed that CEO tenure, CEO duality and CEO with French nationality engage in financial manipulation of records, while firms with experienced female managers and longer tenure are less likely to manipulate accounting results but perk up the financial situation of a firm. Further, the result revealed that larger firm and older firms are less likely to manipulate accounting results while profitable firms and firms with high debt engage in earnings management.

Shoaib and Sidkiqui (2020) examined the influence of earning management (proxied by discretionary and non-discretionary accruals) in the capital structure (proxied by ratio of total debt to total asset)-firm performance (proxied by return on asset) for 802 firms from 5 countries (China, India, Bangladesh, Sri Lanka, and Pakistan) nexus spanning 2001 and 2018. The weighted least square estimation technique's findings showed that increasing leverage lowers agency costs and improves firm performance, whereas earnings management lessens the negative effects of firm size growth that was induced by management manipulation for its benefit. Management also tries to hide asset inefficiency from investors through earnings management.

Wasan and Mulchandani (2020) examined the relationship between earnings management (proxied by discretionary accruals), firm-specific attributes (proxied by profitability, leverage and liquidity) and corporate governance mechanism (proxied by board and udit committee size, diligence and meeting, independent directors, dual CEO and Big4 auditors) for 182 non-financial firms in India spanning 2001 and 2018. The finding of the panel estimator revealed that greater corporate governance guidelines is an effective mechanism in minimizing the misuse of earnings management by firms. The study found a negative relationship between leverage and earnings management for firm-specific characteristics, suggesting that managers of highly leveraged firms are more prone to use opportunistic EM than managers of low-leveraged firms. On managing earnings, however, firm size and expansion have a beneficial impact.

Abubakar et al., (2020) examined the effect of board attributes (proxied by board size, regularity of board meetings, female directors and skill of board members) and earnings management (proxied by real earnings management) using a sample of 45 financial enterprises in Nigeria throughout 2011 and 2016. By the results of the pooled least square estimation technique, it is more likely that corporate managers will engage in the practice of earnings management the higher the number of board expertise, frequency of board meetings board expertise, firm frequency of board meetings, board expertise, firm performance and female directors, firm age, and leverage.

Obigbami *et al* (2016) examined the role of board structure on earnings management with a sample of 137 firms in Nigeria over the period of 2003 and 2010. With the aid of the panel least squares method, it was determined that in Nigeria, board meetings and the dualization of the CEO and chairman positions intensify earnings management techniques while board size, gender, and composition diminish them.

Ojugbeli (2018) investigated the link between corporate structure and earnings management (proxied by discretionary accruals) for nine oil and gas firms in Nigeria for the period of 2009 and 2016. According to the report, CEO and managerial ownership as well as an independent audit committee, encourage earnings management.

Ibrahim *et al.*, (2015) investigated the effect of audit committee attributes (proxied by audit committee expertise, independence, meeting and size) on real earnings management of 20 quoted manufacturing firms in Nigeria for 2008 and 2013. The study established that the expertise of the audit committee minimizes real earnings management in Nigerian manufacturing firms.

Abdulsalam and Babangida (2020) investigated the role of firm sales and size on the sustainability of reporting practice (proxied by return on assets, net profit margin, and return on equity) using a sample of Oil and Gas firms in Nigeria throughout 2004 and 2018. The empirical findings of the fixed effect estimation technique disclosed that firm size enhances sustainability reporting practices, whereas sales growth and leverage lessen sustainability reporting practices of Oil and Gas firms in Nigeria.

## **Theoretical Review**

### **Positive Accounting Theory**

According to Watts and Zimmerman's Positive Accounting Theory (PAT), accounting decisions can help with the creation and execution of these contracts. To make the present financials appear appealing enough to various contracting organizations who use them to determine their terms of contract and charges for the firm, managers may report incomes with slack verifiability while ignoring losses with similar characteristics, for instance, large companies may understate their profits when reporting them to comply with antitrust regulations (Healy and Whalen, 1999, Othman *et al.*, 2006). According to the notion, companies would pick strategies that best maximize benefits for the company as a whole, not only for shareholders. According to this notion, the organization is composed of selfish individuals who work together. Watts and Zimmerman (1978) assert that a firm's management decisions on accounting policies and actions have an impact on the PAT. The management's drive to enhance its utility is directly responsible for these decisions. According to this idea, a firm's use of discretionary accruals can be influenced by internal (firm-specific characteristics) and external (contractual commitments, etc.) motives. Three perspectives efficiency viewpoint, the opportunistic perspective, and the contractual perspective, are available when choosing among accounting policies offered by PAT.

In order to reduce future agency expenses from the first perspective, which is the efficiency perspective, machinery has been installed. To reflect the genuine underlying performance of the entity, accounting systems are used. Therefore, managers use EM to share sensitive information regarding the company's prospects with stakeholders. According to the second viewpoint, managers will arbitrarily choose accounting techniques to further their financial

interests. Therefore, use earnings management strategies to mask the true financial performance of the company and mislead investors for their gain. The last viewpoint, known as the contractual view, presupposes that managers use their preferred accounting practices to reduce expenses associated with a contractual arrangement.

### 3.0 Methodology

The methodology of this study's goals includes the research design, sample size and population, methods of data collection and sources, methods of data analysis, model definition, and variable measurement. A Quantitative research design was adopted in the study. The target population of this study comprises of all the cement firms listed on the Nigerian Exchange as at 31<sup>st</sup> December, 2021. As of December 31<sup>st</sup>, 2021, there are 3 listed cement firms in Nigeria: Dangote Cement Plc, BUA cement Plc and Lafarge Africa Plc. The idea behind sapling is to ascertain an adequate size that will represent the total population thereby saving costs and time wastage. The study will make use of the total enumeration method to determine the sample size. The justification for this sample technique is due to the fact the study population is small and the researcher can manage their data.

### Model Specification

In consonance with standard accounting literature and resemblance with model specification by Olusola and Abdulaziz (2020) the model to access the influence of firm elements on earning management of listed cement firms in Nigeria is specified as follows:

$$EM = f(FC)$$

Where;

EM= denote earnings management while signifies firm characteristics. For this study, firm traits entail profitability, leverage. Thus,  $FC = f(SIZ, AQ)$  [3.2]

Incorporating Eq. [3.2] into Eq. [3.1] becomes

$$EM = f(SIZ, AQ) \quad [3.3]$$

Expressing Eq. [3.3] in econometric form becomes

$$EM_{it} = \alpha_i + SIZ_{it} + AQ_{it} + \varepsilon_{it} \quad [3.4]$$

Where  $EM$  denote earnings management,  $\alpha$  denotes firm – specific intercept,  $SIZ$  and  $AQ$  represents firm size and audit quality.

### Measurement of Variables

The following list of relevant variables and their measurement methods:

**Table 1:**  
**Summary of Explanatory Variables**

Variables	Definition and Measurement of Variables
<b>Earning Management (EM)</b>	<b>Dependent Variable</b>
	Real earnings and based on real activities are expressed as:
	Where $PROD_{i,t}$ = production cost measured by cost of goods sold;
	$TA$ = total asset and $TA_{i,t-1}$ = Total Assets in period $t-1$ ;
	$Sales_{i,t}$ = is yearly sales while $\Delta Sales_{i,t}$ = change in yearly sales.
<b>Independent Variables (Firm Characteristics)</b>	

<b>Firm size (Size)</b>	It is the optimum size of a firm in a given industry at a time which leads to low per unit cost of production. It is measured as the natural logarithm of a firm's total assets (Ishak, Amran & Abdul-Manaf, 2018).
<b>Audit Quality (AQ)</b>	It is a joint probability of market assessments in which auditors detect their customers' abnormalities and report them. Dummy variable that has a value of 1 if the Big Four (Deloitte, PWC, KPMG, and Ernst & Young) have audited the company's financial account and a value of 0 otherwise (Cudia & Dela Cruz, 2018).

**Source:** Researcher's Compilation (2023).

#### 4.0 Results and Discussion

The section shows the study descriptive statistics of the dependent variable earnings management and the independent variables proxies with Profitability and Leverages.

**Table 2:**  
*Descriptive Statistics*

variable	OBS	Mean	Std. Dev.	Max	Min
EM	24	0.0232	0.0296	0.1186	0.0013
SIZE	24	9.6314	1.098	11.884	8.5360
AQ	24	0.75	0.4423	1	0

**Source:** STATA 14.

The descriptive statistics provide information on the Dispersion, symmetry, and variability of the underlying series. The outcome of the descriptive statistics justified that the mean of earnings management (EM) of the quoted cement firms is 0.0232 with standard deviation of 0.0296 and ranges between 0.1186 and 0.0013. When examining firm characteristics indicators firm size around 11.8844 and 8.5360 with an average value of 9.6314 and standard deviation of 1.098. Furthermore, the average of audit quality is 0.75 with a maximum of 1 and minimum of 0 which suggests that some of the listed cement firms were audited by big4 audit firms while some were audited by non-Big big4 audit firms.

**Table 3:**  
*Correlation Matrix*

	EM	SIZE	AQ
EM	1		
SIZE	0.4096	1	
AQ	-0.1513	-0.5754	1

**Source:** STATA 14.

The correlation analysis of the variables revealed that the correlation coefficients between earnings management (EM), firm size (SIZE), and audit quality (AQ) are all below 0.80. This indicates that multicollinearity is not a concern among these variables. These results suggest that as audit quality increases, earnings management tends to decrease. Conversely, larger firms appear to engage in more earnings management practices.

**Table 4:**  
**Regression Results on the Effect of Firms' Characteristics (Proxied Firm Size and Audit Quality) on Earnings Management**

<b>Dependent Variable: Earnings Management (EM)</b>			
	<b>Pooled OLS</b>	<b>Fixed Effect</b>	<b>Random Effect</b>
<b>Constant/Intercept</b>	-0.1874 [0.027]**	0.1127 [0.687]	-0.1874 [0.016]**
<b>SIZE</b>	0.0093 [0.168]	-0.0310 [0.339]	0.0093 [0.151]
<b>AQ</b>	-0.0049 [0.027]**	-0.0675 [0.227]	-0.0049 [0.767]
<b>N</b>	24	24	24
<b>R-sq</b>	0.1706	0.2697	0.1927
<b>L-M Statistics</b>	0.00, (P=1.0000)		
<b>F-Statistics</b>	6.95** [0.0063]	5.18** [0.0019]	9.73*** [0.032]
<b>Hausman Test</b>		1.72 [0.8864]	

**Source:** STATA 14

We used the Breusch-Pagan Lagrange Multiplier (LM) test to verify if the random effect model, suggested by the Hausman test, was appropriate. This test helps determine if the entities have similar or different characteristics, guiding the choice between a random effect model and a pooled model. If the firms share similar characteristics, they don't need separate treatment, as there would be no cross-sectional effect. In this case, a pooled regression would be sufficient for analysis. The LM test's null hypothesis, which is considered more reliable than the p-value of the constant term, assumes no cross-sectional effect across firms. The LM statistic value of 0.00 ( $P > 1.000$ ) indicates that the pooled model is more suitable than the random effect model. We accept the null hypothesis based on the LM statistic, which shows the random effect model's ineffectiveness and supports the pooled model's superiority. Consequently, we'll analyze the impact of firm characteristics (measured by profitability, leverage, firm size, audit quality, and firm age) on earnings management of listed cement firms in Nigeria using the pooled model.

The pooled mode's result also revealed that firm size (SIZE) has a positive but insignificant relationship with the management of listed cement firms' earnings. A coefficient of 0.0093 indicated that for every unit increase in firm size (SIZE), managers of listed cement firms in Nigeria will increase their manipulation of earnings by 0.0093%. This result goes against the expectations of the study and supports positive accounting theory and agency theory, which holds that large firms select accounting policies that allow delaying the disclosure of earnings to future periods and also experience higher agency costs that allow for more opportunistic practices. The implication of the favourable effect of business size on earnings management is that large firms engage in earnings manipulation because their ability to negotiate with auditors allows for more opportunistic tactics. This outcome supports Biswas *et al* (2022) and Pham *et al*. (2022) findings that big businesses engage in earnings management.

The outcome using the pooled estimator shows that audit quality (AQ) has a negative and significant impact on the management of profitability for Nigerian listed cement companies. According to the coefficient value of -0.0049, a unit rise in audit quality will lessen the earnings management of Nigeria's listed cement firms. Audit quality is a persistent paradigm that ensures accurate financial reporting, acts as an efficient governance tool for evaluating internal control systems, offers an acceptable level of comfort regarding the accuracy of business disclosures, and lowers agency costs.

### **Hypotheses testing and discussion of the findings**

**Ho<sub>1</sub>:** There is no significant effect on the earnings management of quoted cement firms in Nigeria.

The result of the pooled model in table 4 showed that firm size (SIZE) has a positive and insignificant relationship with earnings management of listed cement firms, with a coefficient of 0.0093 which indicated that one unit increase in firm size (SIZE) leads to an increase in earnings manipulation by managers of listed cement firms in Nigeria by 0.0093 percent ( $\beta = 0.0093$ ,  $t= 1.44$ ,  $p=0.168$ ). This converts the expectation of this study and supports the positive accounting theory and agency theory that large firms choose accounting policies that permit postponing the earnings disclosure to future periods and also witness greater agency costs which give room for more opportunistic practices. The outcome of the positive effect of firm size on earnings management suggest that large firm engaged in earnings manipulation due to their bargaining power with auditor which gives room for more opportunistic practices. This outcome supports Biswas *et al* (2022) and Pham *et al* (2022)'s findings that big businesses engage in earnings management. In view of the fact that the probability value of the firm size (SIZE) is greater than 5%, it is therefore concluded that firm size has no significant effect on earnings management of quoted cement firms in Nigeria. Hence, the null hypothesis that firm size has no significant effect on the earnings management of quoted cement firms in Nigeria is accepted.

**Ho<sub>2</sub>:** Audit quality has no significant effect on the earnings management of quoted cement firms in Nigeria.

The pooled estimator analysis reveals that audit quality (AQ) has a significant negative impact on earnings management in Nigeria's listed cement firms. A one-unit increase in audit quality leads to a 0.0049 unit decrease in earnings management ( $\beta = -0.0049$ ,  $t= -2.40$ ,  $p=0.027$ ). Audit quality is a crucial factor in ensuring financial reporting integrity, serving as an effective governance mechanism to evaluate internal controls, provide assurance on corporate disclosure quality, and reduce agency costs. The negative relationship between audit quality and earnings management suggests that higher audit quality effectively constrains earnings manipulation, as companies fear reputational damage from detected misstatements. Big Four auditing firms, with their extensive client bases, advanced resources, technology, training programs, and experienced staff, have strong incentives to maintain high audit quality. This contributes to reduced earnings management in the examined cement firms. These findings align with studies by Bassiouny, et al., (2017) and Cudia and Dela Cruz (2018), which found that audit quality mitigates earnings management in listed Egyptian firms and Philippine industrial firms, respectively. Given the statistical significance ( $p < 0.05$ ), we reject the null hypothesis that audit

quality has no significant effect on earnings management in Nigerian quoted cement firms. Instead, we accept the alternative hypothesis that audit quality significantly impacts earnings management in these firms.

### **5.0 Conclusions and Recommendations**

The study examined the role of firm size and audit quality on earnings management of quoted cement firms in Nigeria and, the outcome of the study justified the following;

The study found that firm size (SIZE) has a positive but statistically insignificant relationship with earnings management among listed cement firms. Specifically, a coefficient of 0.0093 suggests that a one-unit increase in firm size would lead to a 0.0093 percent increase in earnings manipulation by the managers of these firms in Nigeria ( $\beta = 0.0093$ ,  $t = 1.44$ ,  $p = 0.168$ ). This indicates that while there is a positive relationship between firm size and earnings management, it is not strong enough to be considered significant.

On the other hand, audit quality (AQ) was found to have a negative and statistically significant impact on earnings management in these firms. The coefficient of -0.0049 means that an improvement in audit quality corresponds to a reduction in earnings management by 0.0049 percent ( $\beta = -0.0049$ ,  $t = -2.40$ ,  $p = 0.027$ ). This result underscores the importance of high audit quality in curbing earnings manipulation.

Based on these findings, the study concludes that both firm performance and audit quality play a crucial role in reducing earnings management among listed cement firms in Nigeria. It is recommended that these firms consistently hire one of the Big Four audit firms as their external auditor. Big Four firms have a strong incentive to maintain high audit standards due to their reputation and the potential risk of losing it if they fail to detect misstatements or manipulations. Additionally, having audit committee members with expertise is suggested to ensure effective monitoring of managerial activities.

Furthermore, the study recommends that listed cement firms increase the presence of major shareholders on their audit committees. Shareholders with significant stakes are likely to be more motivated to safeguard their investments, leading to more rigorous monitoring and supervision, which can help reduce the likelihood of earnings management.

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