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## An analysis of firm performance and real earnings management of listed cement firms in Nigeria

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### Abstract

*This study investigates the effect of firm characteristics (proxied by profitability and leverage) on earnings management of listed cement firms in Nigeria. Secondary data on earnings management (proxied by real discretionary accrual) profitability (measured by return on asset), leverage (measured by ratio of liabilities to total asset). Data was sourced from annual financial statement of selected cement firms in Nigeria over the period of 2014 and 2021. Data collected were analysed using panel least square estimation technique and findings of the study indicates that firm profitability (PERF) has a negative and significant effect on earnings management of listed cement firms in Nigeria, leverage (LEV) exerts a positive and insignificant effect on earnings management of listed cement firms in Nigeria. Since findings from the study revealed that firm profitability has a negative and significant effect on earnings management of listed cement firms in Nigeria which indicates that firm profitability mitigates earnings management of listed cement firms in Nigeria, it is therefore recommended that listed cement firms should increase the level of their efficiency by expanding their business through expansion of production lines so as to make more profit in order to reduce the level of discretionary accruals manipulation in the organizations.*

**Keywords:** Earnings Management, Financial Performance, Leverage, Profitability

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### 1. Introduction

Due to its negative effects on stakeholders, it is now more important than ever to recognize and prevent profits management. Cases of earnings management have occurred in the corporate environment in Nigeria. 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 time period are represented by the earnings recorded in its financial statements (Shoib and Siddiqui, 2020). Earnings management arises when managers manipulate financial reports using their own 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 reported (Healy and Wahlen, 1999). To earn a personal advantage or benefit at the expense of the firm's principal, firm managers alter financial information to hide a firm's genuine economic performance from its stakeholders (Cudia, Cruz, and Estabillo, 2020). Earnings management includes both real-activity manipulation and accrual-based management of earnings. Accrual-based earnings management uses a variety of accounting techniques to raise the baseline of earnings. Real activity manipulation, on the other hand, entails changes made to routine company operations that have an impact on the firm's cash flows (Zang, 2012).

Issues on earnings management have occurred in the corporate environment in Nigeria, including the reported accounting scandals at African Petroleum Plc, Cadbury Nigeria Plc in 2006, as well as Oceanic Bank Plc and Intercontinental Bank Plc, which cast doubt on the veracity of financial reporting. According to Khanh and Khuong (2018), one of the main drivers for managers to engage in the practice of earnings management is the growing need to meet the expectations of stakeholders and financial regulators. This practice gives a false impression of the firm's financial health and performance. Despite the firm-specific element, earnings management is still a strategy used by firm managers to influence earnings and profitability, according to a review of earlier studies. This has made stakeholders and policy makers to question the effectiveness of the firm traits in preventing corporate fraud occasioned by earnings management.

Firm attributes (such as firm size, leverage, cash flow, growth, age) play a significant role in discouraging managers from manipulating the accounting data so that the reported accounting earnings will be of higher quality (Olusola and Abdulasisi, 2020). Earnings management has become a serious problem encountered by corporate organization in Nigeria despite corporate governance codes put in place to ensure accuracy and reliability of financial reports and disclosures (Obigbemi *et al.*, 2016). Earnings manipulation is problematic because it lowers the quality of financial information that is publicly disclosed and thereby distorts the correlation between stock returns and reported earnings, misleading stakeholders and the public about a company's present and future performance (Wasiuzzaman, 2018). Due to the conflicting interests of the various users of the accounting information, many firm managers in Nigeria have been charged with engaging in various forms of earnings management practices in an effort to either keep their jobs or avoid reporting the

situation in the company (Okoye & Alao, 2008). As a result, the value that users place on financial reports has decreased. The following research questions will serve as the particular guidelines for this study;

- i. How does firm profitability influence earnings management of quoted cement firms in Nigeria?
- ii. What is the effect of leverage on earnings management of quoted cement firms in Nigeria?

In line with the research question the specific objectives of the study are as follows;

- i. To examine the relationship between profitability and earnings management of quoted cement firms in Nigeria; and
- ii. To evaluate the effects of leverage on earnings management of quoted cement firms in Nigeria.

### **Research Hypothesis**

The following is the null form of the hypothesis for this study, which is based on the specific objectives, in order to assess the relationship between business firm performance and earning management of listed cement firms in Nigeria:

**H<sub>01</sub>:** Profitability has no significant impact on earnings management of quoted cement firms in Nigeria.

**H<sub>02</sub>:** Leverage has no significant effect on earnings management of quoted cement firms in Nigeria.

## **2. Literature Review**

### **2.1 Conceptual Review**

This section lays out the key concepts of firm performance and earnings management

#### **Profitability**

Profit and market competitiveness are the two major objectives of any organization. Additionally, earnings are the universal vital reality that characterizes the stability and financial soundness of every organization. It relates to the income statement's bottom line, which illustrates how the company is doing financially and attaches a value to the capital of the

shareholders (Khuong, Ha, and Thu, 2019). Based on this, managers work very hard to ensure that the firm's operations turn out well. Thus, in order to maximize annual dividends and minimize taxes, it is believed that present earnings and future profitability are relevant in EM activities (Kasanen et al., 1996). In contrast, businesses that do well often embrace income-decreasing methods, or they manage earnings downward. Therefore, high performing firms adopt income-decreasing strategies to shift income from good years to bad years, to reduce taxes, or to avoid political costs, while low performing firms adopt earning-increasing strategies to conceal their low performance (e.g., for maximizing management compensations and inflating stock prices).

#### **Leverage**

Leverage is defined as the use of debt in funding the activities and operations of a firm. It is an investment tactic where by firm borrow money in order to finance its assets and increase returns on equity (Wasiuzzaman, 2018). Firms source for funds to maintain their activities from various sources, including debts and equity. But excessive leverage can also raise a company's risk of default and insolvency. Companies that frequently engage in EM practices are those with significantly larger debt financing, according to Dang et al. (2018). For the loan arrangement to be legally binding, debt covenants establish a minimum maintenance level of earnings. As a result, this requirement could put the company under pressure to engage in EM operations in order to boost earnings and stay within the bounds of any contracts or loan covenants (Cudia & Dela Cruz, 2018). According to Ardison et al. (2012), when leverage increases, managers' opportunistic behavior reduces because lenders are more likely to scrutinize highly leveraged companies since their cash flows are negatively impacted by debt repayments.

#### **Earnings Management**

Earnings management, or EM, is a practice in which business managers use their own judgment in financial reporting and transaction structuring to alter financial reports, either to mislead stakeholders about the company's true economic performance or to sway the terms of contracts that depend on the accounting figures reported (Healy and Wahlen, 1999). Wasan and Mulchandani (2020) define EM as the deliberate alteration of financial or accounting data by management of a corporation to convey information unknown to markets about the firm's future performance in order to maximize value for stakeholders. In order to strengthen their position, firm managers may control earnings to conceal information that stakeholders should be aware of or to influence the terms of contracts that depend on reported accounting numbers, which is one way that agency problems may contribute to EM (Iturriaga and Hoffmann, 2005). Furthermore, Companies will attempt to maintain the figures generally steady by adding and subtracting cash from reserves accounts in order to avoid having years of extraordinarily excellent or terrible earnings (Dechow, Sloan & Sweeney 1995).

#### **2.2 Empirical Review**

Shoaib and Siddiqui (2020) appraise 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 own benefit. Management also tries to hide asset

inefficiency from investors through earnings management.

For 100 publicly traded companies in the US between 2007 and 2010, Sun, Lan, and Liu (2014) looked at the relationship between independent audit committee characteristics (measured by the audit committee's tenure, average number of additional boards held by members, and the audit committee's block shareholdings) and real earnings management (measured by sales manipulation). According to the study's empirical results, audit committees with several additional directorships are less effective at limiting actual profit management.

Ishak, Amran and Abdul-Manaf (2018) analyzed the interlinkage among firm attributes (proxied by firm size, leverage and auditor's type), corporate governance (proxied by corporate governance index from independent auditor committee, board diversity, board meeting, number of non-executive directors, director skill) and financial reporting quality (proxied by earning management) for listed firms in Malaysia over the period of 2011 and 2015. According to the study's empirical findings, business size enhances the accuracy of financial reporting, which suggests that managers of large companies do not distort their operating cash flow. Leverage and the kind of auditor also reduce the quality of financial reporting, but corporate governance counteracts the negative effects of company characteristic.

Wasiuzzaman (2018) assessed the influence of industry parameters (proxied by asset tangibility and volatility, profitability, leverage) on earnings management for 13 different industries in Malaysia for the period of 2005 and 2012. The authors used panel least squares technique and found that Malaysian companies participate in earnings management efforts in sectors with low earnings volatility, profitability, and fixed asset base.

El-Diri, Lambrinou dakis and Alhadab (2020) examined the role of corporate

governance (proxied by board tenure, qualification and independence board) in the relationship between market concentration (proxied by Herfindahl index) and earning management (proxied by accrual discretionary) and earning management for all listed firms in the United State for the period of 1989 and 2016. The study employed Generalized Method of Moment and found that organizations in high concentrated markets utilize accrual and real earnings management more than firms in non-concentrated markets. In addition, the study established that corporate governance is an effective mechanism in minimizing earnings management in less concentrated markets while in highly concentrated market, corporate governance enables managers to alternate accrual with real earnings management.

Bouaziz, Salhi and Jarboui (2020) analyze the impact of CEO (proxied by dual CEO, age, gender, expertise, compensation and tenure) and firm-specific traits (proxied by firm size, leverage, age, market-to-book and performance) on earnings management (proxied by discretionary accruals) of 151 listed French enterprises covering the period of 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 experience female managers and longer tenure are less likely to manipulate accounting result 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 result while profitable firms and firms with high debt engage in earning management.

Hasnan, Razali and Hussain (2020) explore the role of corporate governance and firm-specific attributes on financial restatement for 147 Malaysian non-financial firms over the period of 2011 and 2016. The result of panel estimation approach indicates a negative effect on financial restatement

while leverage exerts a positive impact on financial restatement which suggests that firms with improved performance do not engage in financial restatement and the management's incentive to manipulate earnings is increased by company leverage. Moreover, firm age liquidity and corporate governance mechanism insignificant influence on financial restatement.

Asogwa, Ofoegbu, Nnam and Chukwunwike (2019) explore the influence of corporate governance model less than high-growth, profitable businesses with significant debt and affiliations to business (proxied by unitary corporate leadership, dual board leadership) on earning quality (proxied by earning persistence) of 37 quoted manufacturing firms in Nigeria spanning 2014 and 2018. According to the study's two-stage least square estimate method, companies with boards where the CEO and chairperson have comparable financial skills have higher earnings persistence.

Soyemi and Olawale (2019) analyze the nexus between firm traits (proxied by firm size, profitability, growth and tangibility) and financial reporting quality (proxied by absolute value of the residual) for 25 quoted manufacturing firms in Nigeria over the period of 2009 and 2016. The empirical finding of the fixed effect estimator indicates that firm size and profitability improve quality of financial information whereas growth and tangibility weaken financial reporting quality of manufacturing firms in Nigeria.

Olusola and Abdulasisi (2020) evaluate the role of firm characteristic (proxied by leverage, size of the firm and firm performance) on financial restatement (proxied by financial restatement disclosure index) of 5 quoted financial and non-financial firms in Nigeria spanning 2010 and 2019. The outcome of the spearman correlation analysis disclosed that leverage is positively related to financial restatement while firm size and performance are negatively related to financial restatement.

Kwanbo and Anyalewechi (2021) evaluate the link between firm attributes (proxied by dividend payout ratio, firm size, profitability, tax rate and internal control system measured by ratio of number of independent directors to total number of directors on the board) and earnings management (proxied by absolute value of residuals) of 14 deposit money banks in Nigeria. The study utilized random effect model and found that earning management decline as a result increase profit, tax rate, dividend pay-out and improved internal control system of deposit money banks in Nigeria.

### **2.3 Theoretical Review**

#### **Agency Theory**

According to Ross's (1973) and Jensen and Meckling's (1976) agency theory, shareholders may be the target of EM by management for their personal gain as a result of the separation of ownership and control. Conflict of interest between the primary (firm owners) and firm managers, who oversee and control the operation of the firm, can cause agency problems since they can act speculatively to maximize their personal gains at the expense of the firm owners (Watts & Zimmerman, 1986). Because managers have greater access to information than shareholders, they can pursue their own interests by changing the reported earnings of the company in order to meet the firm's profitability targets, which creates an information asymmetry problem (Nermeen, 2014). Therefore, the principals' strong oversight of managers is considered as a checkpoint to restore shareholders' interest by thwarting managers' plight-intentions.

According to Yimenu and Surur (2019), annual reports serve as a key information source for shareholders who are unable to make significant financial commitments in order to learn about a manager's opportunistic activities. Managers of companies with dispersed ownership have an incentive to improve the quality of disclosure in order to aid shareholders in

keeping an eye on their actions. In order to ensure agent-principal interest alignment, protect shareholders' interests, and thereby reduce agency cost, the agency theory presents a basis for the governance of firms through various internal and external control mechanisms (Martinez, 2010). However, manipulation is possible regardless of the type of relationship between principals and their agents due to pressure, opportunity, and ethics (Nicola, 2016).

### 3. Methodology

A research design is the overall strategy utilized to carry out research that defines a succinct and logical plan to tackle established research question through the collection, interpretation, analysis and discussion of data (Kothari, 2008). It is also referred to as a set of rules and procedures upon which research is based and against which claims for knowledge and assumption are evaluated for most decision making. The study uses a quantitative ex-post facto research approach to examine how business factors affect how earnings are managed at listed cement companies in Nigeria. Ex post facto research designs entail looking into something after it has already happened, without the researcher getting involved (Kerlinger, 1964).

#### 3.1 Population and Sample of the Study

The target population of this study comprises of all the cement firms listed on Nigerian Stock Exchange as at 31<sup>st</sup> December, 2021. As at December 31<sup>st</sup>, 2021, there are 3 listed cement firms in Nigeria which are 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. The study makes use of the total enumeration method to determine the sample size. Therefore, census sample was used to cover all cement companies.

#### Source and method of Data Collection

This study employed secondary data. Annual data on firm profitability (proxied

by ratio of net income to total asset), leverage (proxied by ratio of debt to equity) to explore the nexus between firm characteristics and earnings management of listed cement firms in Nigeria will be glean from published reports of the listed cement firms covering the period of 2014 – 2021.

#### 3.2 Method of Data Analysis

This study utilizes of panel estimation techniques, such as panel least square, fixed effect, and random effect estimation approach, to assess the impact of business characteristics on the profits of listed cement firms in Nigeria. This estimate method is justified because it eliminates person-specific effects that might be linked with the independent variables in the model (Hausman & Taylor, 1981). The panel least square estimation technique assumes that there are no differences among the data matrices of the cross-sectional dimension (N).

Individual heterogeneity is disregarded by pool OLS since it enforces a uniform intercept and slope coefficient for all cross-sections (Baltagi, 2005). Although each individual, or cross-sectional unit, may have some unique traits of their own, the fixed effect model permits the intercept in the regression model to vary between individuals

#### 3.3 Model Specification

In consonance with standard accounting literature and resemblance with model specification by Kargi and Zakariya (2021) the model to access the influence of firm elements on earning management of listed cement firms in Nigeria is specified as follows:

$$EM = f(FC) \quad [3.1]$$

*EM* denote earnings management

*FC* signifies firm performance.

For this study, firm traits entail profitability, leverage. Thus,  $FC = f(PERF, LEV)$  [3.2]

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

$$EM = f(PERF, LEV) \quad [3.3]$$

Expressing Eq. [3.3] in econometric form becomes

$$EM_{it} = \alpha_i + PERF_{it} + LEV_{it} + \varepsilon_{it} \quad [3.4]$$

*LEV* represents leverage.

Where:

*EM* denote earnings management,

$\alpha$  denotes firm – specific intercept

*PERF* denote profitability

**Measurement of Variables**

The following list of relevant variables and their measurement methods:

**Summary of Explanatory Variables**

Variables	Definition and Measurement of Variables
<b>Dependent Variable</b>	
<b>Earning Management (EM)</b>	<p>Earning management is the deliberate alteration of financial or accounting data by managers of a corporation to indicate information about the firm's future performance that is unknown to markets in order to maximize value for stakeholders. In accordance with Roychowdhury (2006), the manipulation of production cost measured in real earnings and based on real activities is expressed as:</p> $\frac{PROD_{i,t}}{TA_{i,t-1}} = \beta_0 + \beta_1 \left[ \frac{1}{TA_{i,t-1}} \right] + \beta_2 \left[ \frac{Sales_{i,t}}{TA_{i,t-1}} \right] + \beta_3 \left[ \frac{\Delta Sales_{i,t}}{TA_{i,t-1}} \right] + \mu_{i,t}$
<b>Independent Variables (Firm Characteristics)</b>	
<b>Profitability</b>	<p>Profitability is a crucial component of a company's financial reporting and a key indicator of its performance. It demonstrates the business' ability and capacity to produce profits at a given rate of sales, level of assets, and stock of capital over a given time period. Profitability in this study is determined by return on asset (ROA), which is defined as the ratio of net income to total assets (Putri &amp; Indriani, 2019).</p>
<b>Leverage (LEV)</b>	<p>Leverage entails use of debt in funding the activities and operations of a firm. In line with the study of Agrawal, Sehgal and Vasishth (2020), Leverage is measured as ratio of debt to Equity.</p>

**4. Results and Discussion**

The section presents the study descriptive statistics of the dependent variable earnings

management and the independent variables proxies with Profitability and Leverages.

**Descriptive Statistics**

Variable	OBS	Mean	Std. Dev.	Max	Min
EM	24	0.0232	0.0296	0.1186	0.0013
PERF	24	0.1127	0.0756	0.2491	0.0071
LEV	24	0.5663	0.321	1.3271	0.0427

**Source: STATA 14.**

The result of the descriptive statistics of the sampled listed cement firms in Nigeria over the period of 2014 and 2021. Before the analysis, the descriptive statistics provide

information on the distribution, symmetry, and variability of the underlying series. The result of the descriptive statistics indicates that the mean of earnings management

(EM) of the listed cement firms is 0.0232 with standard deviation of 0.0296 and ranges between 0.1186 and 0.0013. When examining firm performance indicators, firm performance, the average performance for the listed cement firms over the period of 2014 and 2021 is 0.1127 with standard

deviation of 0.0756 and ranges between 0.2491 and 0.0071. The mean value of leverage is 0.5663 which indicates that 56.63% of the asset of the listed cement firms is financed via debt. It ranges between 1.3271 and 0.0427 with standard deviation of 0.321.

**Correlation**

	EM	PERF	LEV
EM	1.0000		
PERF	-0.0881	1.0000	
LEV	0.1177	-0.1126	1.0000

**Source: STATA 14.**

The main purpose of a correlation matrix is to examine any potential multicollinearity among the independent variables. Multicollinearity, according to Islam (2014), exists if the correlation between two independent variables is more than 0.80. The result of the correlation among the variables showed that the correlation coefficients among the variables (EM, PERF and LEV) is below 0.80 indicating

that there is no problem of multicollinearity among the variables. Results indicate that earnings management is negatively related to firm performance while earnings management is positively related to leverage. Firm performance is negatively related to leverage. As a result, the model utilized has no significant issues with multicollinearity between variables, which improves the study's dependability.

**Multicollinearity Test**

**Variation Inflation Factor (VIF)**

Variable	VIF	1/VIF
PERF	5.08	0.197033
LEV	1.08	0.925512
Mean VIF	2.92	

**Source: STATA 14.**

To be more certain that there is no multicollinearity issue with the variables, Tab shows the Variation Inflation Factor (VIF) result. The variance inflation factor (VIF), which measures the portion of an explanatory variable's standard error caused by its correlation with other explanatory

variables, was used to test for multicollinearity. According to a general rule, variables are multicollinear if their VIF is greater than 10 (VIF > 10) or their tolerance is less than 0.10 (1/VIF 0.10) (Magumisi & Mawanza, 2014).



**Regression Results on the effect of Firm performance (Proxied Firm Performance and Leverage) on Earnings Management**

Dependent Variable: Earnings Management (EM)			
	<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>PERF</b>	-0.2968 [0.094]*	0.0549 [0.220]	-0.2968 [0.077]*
<b>LEV</b>	0.0056 [0.761]	-0.0143 [0.564]	0.0056 [0.757]
N	24	24	24
R-sq	0.1706	0.2697	0.1927
L-M Statistics	0.00, (P=1.0000)		
F-Statistics	6.95** [0.0063]	5.18** [0.0019]	9.73*** [0.032]
Hausman Test		1.72 [0.8864]	

**Source: STATA 14**

The results of the Hausman, Breusch, and Pagan Lagrangian multiplier tests, as well as the results of the pooled, fixed, and random effects on the effect of firm characteristics (proxied by profitability and leverage) on earnings management of listed cement firms in Nigeria are presented to show the effectiveness and consistency of the model used to estimate the pooled, fixed, and random effects.

According to the results using the pooled estimator, profitability (PERF) has a negative and significant impact on the management of earnings for listed cement manufacturers in Nigeria. A unit rise in corporate profit is estimated to result in a 0.2968 drop in real discretionary accruals, according to the coefficient value of -0.2968, which shows that firm profitability helps to regulate earnings at Nigeria's listed cement companies. The outcome confirms what the study and agency theory predicted, which holds that corporate profit helps to mitigate agency problems. Due to the strong and negative correlation between company profitability and earning management, it is possible that manipulating earnings upward to increase profit causes excessive investor claims, which in turn causes agency issues. This result reinforces the conclusions of Hasnan, Razali, and Hussain (2020) and

Olusola and Abdulaziz (2020), whose investigation found that profitability reduces earnings management.

Leverage (LEV) exhibits a positive, albeit negligible, influence on earnings management of listed cement manufacturers in Nigeria, according to the conclusion of the pooled model provided the coefficient value of 0.0056 indicates that an increase in the debt of Nigeria's publicly traded cement manufacturers will result in a 0.0056 increase in earnings management. This contradicts the study's anticipated conclusion. The agency theory, which maintains that companies with high levels of leverage are motivated to raise the level of their corporate reporting voluntarily to their stakeholders through conventional financial statements because disclosure of financial information can aid in minimizing agency costs and help creditors to evaluate the company's volatility and to safeguard their resources, is supported by the positive relationship between leverage and earnings management. The consequence of the positive impact of leverage on earnings management implies that high leverage corporations inflate their financial statements in order to meet their contractual obligations and hence encourage additional manipulation. The results of this study

support those of Ishak, Amran, and Abdul-Manaf (2018), Wasiuzzaman (2018), and Cudia, Cruz, and Estabillo (2020), whose research indicates a beneficial relationship between leverage and earnings management.

### **Hypothesis**

**H<sub>01</sub>:** Profitability has no significant impact on earnings management of quoted cement firms in Nigeria.

The result of the pooled least square estimation technique indicates that firm profitability (PERF) has a negative and significant effect on earnings management of listed cement firms in Nigeria ( $\beta = -0.2968$ ,  $t = -1.77$ ,  $p = 0.094$ ). The result shows that a one percent increase in corporate profit leads to -0.0283 decrease in real discretionary accruals which indicates that firm profitability mitigate earnings management of cement firms in Nigeria. The result supports the expectation of the study and agency theory which claim that corporate profit contributes to mitigating agency issues. The negative and significant relationship between firm profitability and earning management suggest that managing earnings upward to boost profit leads to excessive claim from investors that in turn, leads to agency problems.

**H<sub>02</sub>:** Leverage has no significant effect on earnings management of quoted cement firms in Nigeria.

With respect to the effect of leverage on earnings management, the result of the pooled model presented indicates that indicates that leverage (LEV) exerts a positive and insignificant effect on earnings management of listed cement firms in Nigeria ( $\beta = 0.0056$ ,  $t = 0.31$ ,  $p = 0.761$ ). The coefficient value of 0.0056 implies that an increase in debt of listed cement firms in Nigeria increase earnings management by 0.0056. This negates the expected outcome of this study.

### **5. Conclusion and Recommendations**

This study examines the effect of firm characteristics on earning management of listed cement firms in Nigeria spanning the period of 2014 and 2021. This is with the view of examining the effect of profitability on earning management of listed cement firms in Nigeria, the result of the study indicates that;

Firm profitability (PERF) has a negative and significant effect on earnings management of listed cement firms in Nigeria. The result shows that a one percent increase in corporate profit leads to decrease in real discretionary accruals which indicates that firm profitability mitigate earnings management of cement firms in Nigeria.

Leverage (LEV) exerts a positive though insignificant effect on earnings management of listed cement firms in Nigeria. The coefficient value implies that an increase in debt of listed cement firms in Nigeria increase earnings management. In view of the findings of this study, policy implication and conclusion, the following recommendations were made.

It is recommended that the board of directors of listed cement firms in Nigeria should consistently engage the services of audit committee members with expertise. This will assist in checkmating the operations of the managers and limit the instance of earnings management. Since findings from the study revealed that firm profitability has a negative and significant effect on earnings management of listed cement firms in Nigeria which indicates that firm profitability mitigates earnings management of listed cement firms in Nigeria, it is therefore recommended that listed cement firms should increase the level of their efficiency by expanding their business through expansion of production lines so as to make more profit in order to reduce the level of discretionary accruals manipulation in the organizations.

**References**

- Agrawal, T. J., Sehgal, S. & Vasishth, V. (2020). Firm attributes, corporate fundamentals and investment strategies: An empirical study for Indian stock market. *Management and Labour Studies*, 1–22
- Ardison, K., Martinez, A., & Galdi, F., (2012). The Effect of Leverage on Earnings Management in Brazil. *Advances in Scientific and Applied Accounting*, 5(3), 305-323.
- Asogwa, C. I., Ofoegbu, G. N., Nnam, J. I. & Chukwunwike, D. O. (2019). Effect of corporate governance board leadership models and attributes on earnings quality of quoted Nigerian companies. *Cogent Business & Management*, 6(1), 1-31.
- Baltagi, B. H. (2005). *Econometric Analysis of Panel Data*. 3rd Edition, John Wiley & Sons Inc., New York.
- Bouaziz, D., Salhi, B. & Jarboui, A. (2020). CEO characteristics and earnings management: empirical evidence from France. *Journal of Financial Reporting and Accounting*, 18(1), 77-110.
- Cudia, C. P., Cruz, A. L. D. & Estabillo, M. B. (2020). Effect of Firm Characteristics and corporate governance practices on earnings management: Evidence from Publicly Listed Property Sector Firms in the Philippines. *Vision*, 1–11.
- Cudia, C., & Dela Cruz, A. (2018). Determinants of earnings management choice among publicly listed industrial firms in the Philippines. *DLSU Business & Economics Review*, 27(2), 119–129.
- Dang, N., Fangjun, W., Zhang, J. & Zhou, J. (2018). Ownership structure and real earnings management: Evidence from China. *Journal of Accounting and Public Policy* 39: 106733.
- Hasnan, S., Razali, M. H. M. & Hussain, A. R. M. (2020). The effect of corporate governance and firm-specific characteristics on the incidence of financial restatement. *Incidence of financial restatement*, 28(1), 244-267.
- Hausman, J. A. & Taylor, W. E. (1981). Panel Data and Unobservable Individual Effects. *Econometrica*, 49(6), 1377-1398.
- 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.
- Ishak, R., Amran, N. A. & Abdul-Manaf, K. B. (2018). Firm Characteristics and Financial Reporting Quality: The Moderating Role of Malaysian Corporate Governance Index. *The Journal of Social Sciences Research*, 6, 924-932.
- Islam, R. M. (2014). A caution regarding rules of thumb for variance inflation factors. *Quality and Quantity Springer*, 41, 673–690.
- Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency cost and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance and Takeovers. *American Economic Review*, 76, 323-329.
- Kargi, H. S. & Zakariya, M. (2021). Moderating effect of free cash flow and managerial ownership on earnings management of listed conglomerate firms in Nigeria. *Accounting and Taxation Review*, 5(2), 30-52.
- Kasanen, E., Kinnunen, J., & Niskanen, J. (1996). Dividend based earnings management: Empirical evidence

- from Finland. *Journal of Accounting and Economics*, 22, 313–325.
- Kerlinger, F. H. (1964). *Foundations of behavioural Research: Educational and Psychological Inquiry*, New York: Holt, Rinehart & Winston.
- Khanh, H. T. M., & Nguyen, V. K. (2018). Audit Quality, Firm Characteristics and Real Earnings Management: The Case of Listed Vietnamese Firms. *International Journal of Economics and Financial Issues*, 8(4), 243-256.
- Khuong, N. V., Ha, N. T. T. & Thu, P. A. (2019). The relationship between real earnings management and firm performance: The case of energy firms in Vietnam. *International Journal of Energy Economics and Policy*, 9(2), 307-314.
- Kwanbo, M. L. & Anyalewechi, C. (2021). Firm attributes and earnings management of listed deposit money banks in Nigeria: Does dividend payout matters? *Gusau Journal of Accounting and Finance*, 2(2), 1-22.
- Nermeen, F. (2014). Theories and determinates of voluntary disclosure. *Accounting and Finance Research*, 3(1).
- Obigbemi, I. F., Omolehinwa, E. O., Mukoro, D. O., Egbide Ben-Caleb, E. & Olusanmi, O. A. (2016). Earnings Management and Board Structure: Evidence from Nigeria. *Sage*, 1-15.
- Okoye, E. J. & Alao, B. B. (2008). The ethics of creative accounting in financial reporting: The challenges of regulatory agencies in Nigeria. *Certified National Accountant*, 37(14), 483-503.
- Olusola, L. & Abdulasisi, A. M. (2020). Firm Characteristics and Restatement of Financial Statement in Nigeria. *International Journal of Research and Innovation in Social Science*, 4(8), 623-628.
- Price, Y., & Sun, H. (2017). Board composition and earnings management in Canada. *Journal of Corporate Finance*, 10, 431-457.
- Ross, S. (1973) The Economic Theory of Agency: The Principal's Problem. *American Economic Review*, 63, 134-139.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370.
- Shehu, U. H. & Bello, A. (2013). Firm characteristics and financial reporting quality of listed manufacturing firms in Nigeria. *International Journal of Accounting, Banking and Management*, 1(3), 1-16.
- Shirzad, A. & Haghghi, R. (2015). The effect of corporative leverage on earnings management in drug industry. *Research Journal of Finance and Accounting*, 6(17), 119-124.
- Shoab, A. & Siddiqui, M. A. (2020). Earnings management and theoretical adjustment in capital structure performance pattern: Evidence from APTA economies. *Borsa\_Istanbul Review*
- Soyemi, K. A. & Olawale, L. S. (2019). Firm characteristics and financial reporting quality: evidence from non-financial firms in Nigeria. *International Journal of Economics, Management and Accounting*, 27(2), 445-472.
- Sun, J., Lan, G. & Liu, G. (2014). Independent audit committee characteristics and real earnings management. *Managerial Auditing Journal*, 29(2), 153-172.
- Wasiuzzaman, S. (2018). Industry characteristics and earnings



- management: a study of Malaysian industries. *International Journal of Emerging Markets*, 13(5), 837-854.
- Watts, R. & Zimmerman, J. (1983). Agency Problems, Auditing, and the Theory of the Firm: Some Evidence. *Journal of Law and Economics*, 26(3), 613-633.
- Yimenu, K. A. & Surur, S. A. (2019). Earning Management: Agency and Signalling Theory Perspective in Ethiopia. *Journal of Economics, Management and Trade*, 24(6), 1-12.
- Zang, A. Y. (2012). Evidence on the Trade-Off between Real Activities Manipulation and Accrual-Based Earnings Management. *The Accounting Review*, 87(2), 675-703.