INFLUENCE OF INSTITUTIONAL OWNERSHIP AND CORPORATE CULTURE ON REAL EARNINGS MANAGEMENT IN LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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Abstract
This study examines the influence of institutional ownership and corporate culture on real earnings management in listed industrial goods firms in Nigeria. It analyzes how institutional ownership and corporate culture impact real earnings management. The study was analyzed using descriptive statistics, correlation analysis, and panel regression models (fixed effects) based on thirteen industrial goods firms listed on the Nigerian Exchange Group, observed over a ten-year period from 2016 to 2025. The study revealed that institutional ownership significantly influences real earnings management (REM) in listed industrial goods firms in Nigeria, suggesting that institutional investors, with their sophisticated understanding of financial statements and active monitoring roles, play a pivotal role in shaping managerial behaviour regarding earnings manipulation. Conversely, corporate culture was found to have no significant impact on REM practices, indicating that the principles, convictions, and standards within these firms do not substantially shape earnings management behaviour, possibly due to a strong regulatory environment or uniform industry practices. Based on these findings, it is recommended that policymakers leverage institutional ownership to enhance corporate governance and reduce REM by strengthening regulations that support the monitoring roles of institutional investors, thereby fostering transparent financial practices.

Keywords: Corporate culture, industrial sector, institutional ownership, Nigeria, real earnings management.

1.0 Introduction

Shareholders willingly delegate their resources to managers with the expectation that these managers will judiciously utilize their discretionary powers to enhance shareholder wealth instead of misappropriating company assets (Kee, 2010, as cited in Junaidu & Abdulrahman, 2019). Financial reporting is pivotal in this principal-agent dynamic, as it supplies

stakeholders with vital information necessary for evaluating the returns on their investments. In particular, reported earnings are deemed highly significant by shareholders for forecasting future returns (Das & Kim, 2018). Nevertheless, managers frequently take advantage of the discretion allowed by accounting standards to engage in earnings management, whether through accruals or real activities, in order to obscure poor performance, inflate reported figures, or fulfil personal ambitions such as increased compensation or career progression (Abarbanell & Lehavy, 2018; Hui & Fatt, 2019).

While accrual-based earnings management has garnered considerable academic focus, real earnings management (REM), which entails modifying actual business operations (for instance, reducing discretionary expenditures, overproducing, or manipulating sales) to meet earnings objectives or mislead investors, has become a growing concern for regulators, investors, and scholars. Such actions can compromise the quality of earnings and result in detrimental effects on efficient capital allocation, firm valuation, and the integrity of financial markets (Ahmad, Mansor, & Wan-Mohamad, 2021).

Despite growing scholarly and regulatory attention to REM, empirical evidence on its firm-level determinants remains limited, particularly in emerging markets such as Nigeria. Prior studies have concentrated largely on macro-level and governance-related determinants of REM, such as executive compensation, industry competition, accounting standards, and regulatory frameworks, while paying comparatively little attention to firm-specific behavioural and ownership attributes. Two theoretically important but empirically under-examined variables in this regard are institutional ownership and corporate culture. Institutional investors are expected, through active monitoring and voting influence, to constrain managerial opportunism, while corporate culture, reflecting a firm's shared values and ethical orientation, can either reinforce transparent reporting or create pressure-driven environments conducive to earnings manipulation. Yet, no known study has jointly examined how these two firm-specific characteristics shape REM among listed industrial goods firms in Nigeria, a sector characterised by capital intensity, cyclical earnings, and heavy reliance on institutional capital. This represents a clear and specific gap that the present study addresses.

To address these gaps, the current study investigates the relationship between selected firm-specific characteristics and real earnings management in the Nigerian industrial goods sector. Specifically, it explores how institutional ownership and corporate culture affect REM practices among listed industrial goods firms in Nigeria.

To fulfil the outlined research objectives, the following null hypotheses have been established:

H_{01}: Institutional ownership has no significant impact on real earnings management in listed industrial goods firms in Nigeria.

H_{02}: Corporate culture has no significant effect on real earnings management in listed industrial goods firms in Nigeria.

2.0 Literature Review

This section reviews the key concepts underpinning the study, namely corporate culture, ownership structure, and real earnings management, in order to establish a shared conceptual foundation for the empirical analysis that follows.

Corporate Culture

Corporate culture has increasingly been examined as an informal governance mechanism capable of shaping managerial reporting behaviour; the studies reviewed below illustrate this influence from several perspectives.

An informal institution made up of deeply held beliefs and conventions within a company is called corporate culture. A strong company culture is something that senior executives appreciate and work hard to develop because they believe it adds value (Graham, Grennan, Harvey, & Rajgopal, 2022). Guiso, Sapienza, and Zingales (2015) found that corporate culture fosters social norms inside a company that can lessen agency problems such as moral hazard, and that improvements in agency problems, in turn, lead to increased company value and performance. In a related study, Pan, Siegel, and Wang (2017) found that companies exhibiting a higher inclination towards risk and uncertainty, often described as a corporate risk culture, tend to invest more heavily in research and development.

Furthermore, firms characterised by weak corporate cultures tend to exhibit less transparency and incur higher costs when acquiring information; Pacelli (2019) linked such cultural deficiencies to analyst forecasts and reports that are less accurate and less useful. Conversely, Li, Mai, Shen, and Yan (2021) found that companies with a strong corporate culture are less likely to use discretionary accruals to manage their profitability, since this type of discretionary accrual earnings management adversely affects the comparability of financial statements (Sohn, 2016). Based on these findings, it is reasonable to assume that companies with a strong corporate culture exhibit higher financial statement comparability. This study therefore adopts the recently developed Li, Mai, et al. (2021) measure of corporate culture strength, given its established validity in the extant literature.

Ownership Structure

Ownership structure is closely related to corporate culture as another firm-level governance attribute, and its various forms have distinct implications for managerial discretion over earnings, as discussed below.

The percentage of equity (ordinary shares) held by various parties in a company is known as its ownership structure. The owners of the corporation consist of entities such as promoters, private and public firms, individual and institutional investors, and foreign shareholders. Every business has a different ownership structure for a variety of reasons, including variations in the stability of the external environment, variations in the laws, and economies of scale. According to Faruk and Bashir (2017), ownership structures in Nigeria might be private (family), managerial, block, foreign, free float, government, or institutional. The division of ownership and control could encourage managers to falsify data and manipulate profits for their own gain. Institutional, managerial, foreign, and concentrated ownership are examples of such ownership structures.

Real Earnings Management

Having discussed corporate culture and ownership structure, this sub-section turns to the dependent construct of the study, real earnings management, and situates it within the broader earnings management literature.

The intentional attempt to achieve a desired amount of earnings by unethical means is known as earnings management (Bello, 2021). The application of judgment by managers in financial reporting can result in a variety of dishonest practices, including earnings management. The concept of earnings management encompasses manipulations beyond accounting decisions; hence, the use of accounting decisions to accomplish objectives is compatible with the concept of earnings management (Murya, 2020). Earnings management entails the preparation of financial reports in line with the managers' interests, such as boosting the reported value of the company. Managers can easily control earnings because of the flexibility of accounting standards (Okoye & Alao, 2018). Real earnings management is the type of earnings management that involves managers using their discretion to achieve a

specific goal through a change in regular business activities (Masahiro, Fumihiko, & Tomoyasu, 2023). According to Gunny (2015), real earnings management activities are linked to an economically significant decline in subsequent operating performance, meaning that real earnings management is, in turn, influenced by the performance of the companies that engage in it.

Theoretical Review

This study is anchored on two complementary theoretical perspectives, agency theory and resource dependence theory, which together provide a robust lens for understanding how institutional ownership and corporate culture influence real earnings management. Each theory is discussed in turn below, followed by a discussion of how the two are integrated in this study.

Agency Theory

Agency theory, introduced by Jensen and Meckling (1976), provides a fundamental framework for analysing conflicts of interest that arise from the division of ownership and control within contemporary corporations. The theory posits that principals (shareholders) assign decision-making power to agents (managers), which can lead to agency problems when the mechanisms for aligning interests are insufficient. Due to information asymmetry, where managers have greater insight into the firm's internal workings, agents may engage in self-serving actions that detract from the maximisation of shareholder wealth. To address these risks, principals incur agency costs through monitoring, bonding, and residual losses (Jensen & Meckling, 1976).

In relation to this study, agency theory provides a direct explanation for the tendency towards real earnings management (REM) among publicly listed industrial goods companies in Nigeria. Managers, under significant pressure to achieve earnings, revenue, and cash flow targets amidst operational, political, and economic uncertainties, may manipulate actual business activities, such as premature revenue recognition, deferral of operating expenses, misclassification of revenues, or reclassification of capital expenditures, to present a more favourable financial performance and secure personal advantages (Odibo, 2021). Institutional ownership and corporate culture are identified as vital governance mechanisms that can either intensify or alleviate these agency conflicts.

Resource Dependence Theory

Resource Dependence Theory (RDT), introduced by Pfeffer and Salancik (1978), serves as a complement to agency theory by examining how organisations navigate external dependencies to acquire essential resources necessary for their survival and growth. In contrast to the Resource-Based View proposed by Barney (1991), which focuses on internal capabilities, RDT underscores the interdependence of firms with external entities such as investors, regulators, suppliers, and various stakeholders. Organisations must proactively address power imbalances and environmental uncertainties, including changes in regulations, market fluctuations, and resource limitations, to ensure continued access to critical resources (Fang & Twite, 2017; Lee, Chen, & Chiu, 2015). When applied to earnings management, RDT implies that firms might resort to real earnings management as a strategic reaction to external pressures, utilising it to convey financial stability, uphold legitimacy with influential stakeholders, or mitigate perceived risks in unstable environments. In the industrial goods sector of Nigeria, where companies significantly rely on institutional investors for both capital and legitimacy, the management of these external relationships is crucial.

Integration of Agency Theory and Resource Dependence Theory

Agency theory and Resource Dependence Theory work together effectively to elucidate the impact of institutional ownership and corporate culture on real earnings management in publicly listed industrial goods companies in Nigeria. Agency theory sheds light on the internal conflicts between principals and agents, as well as the managerial opportunism that drives REM. In contrast, RDT broadens this understanding by emphasising how external dependencies on resources influence the environment in which such opportunism takes place.

Institutional ownership acts as a crucial connecting element: from the agency perspective, institutional investors function as knowledgeable monitors who mitigate information asymmetry and limit managerial self-interest through their active oversight and voting influence. From the RDT standpoint, these investors are vital external resource providers (including capital, expertise, and legitimacy) that firms must secure. Consequently, robust institutional ownership is anticipated to curtail REM by aligning managerial actions with long-term value creation while also assisting firms in managing external dependencies more effectively.

Corporate culture serves as an internal moderating factor that synthesises both theories. A strong, ethical corporate culture can diminish agency costs by promoting shared values, transparency, and accountability, thus deterring opportunistic REM. Concurrently, from the RDT perspective, corporate culture allows firms to formulate adaptive strategies in response to external uncertainties, influencing how managers address stakeholder expectations without engaging in manipulative behaviour. In the context of Nigeria's challenging institutional landscape, a supportive corporate culture may enhance the monitoring effect of institutional ownership, resulting in reduced levels of REM.

This comprehensive theoretical framework establishes a strong basis for the research. It suggests that institutional ownership and corporate culture are not independent entities; rather, they interact to shape managerial discretion regarding real activities. By merging the internal governance perspective of agency theory with the external resource dynamics of Resource Dependence Theory (RDT), this study addresses significant gaps in the existing literature on earnings management in emerging markets, especially in the Nigerian industrial goods sector.

Empirical Review

This section reviews prior empirical studies on the determinants of earnings management, with particular attention to governance- and ownership-related variables, in order to situate the present study within the existing body of knowledge and to identify how it extends prior work.

Mohammad et al. (2021) studied the relationship between board structure and real earnings management, using audit committee independence as a mediating variable, among 91 listed businesses in the industrial and service sectors on the Amman Stock Exchange (ASE) between 2009 and 2018. Using the fixed-effects technique, the study found that board size and CEO duality had a substantial and adverse effect on REM, while board independence was positively associated with REM; the audit committee's independence was also found to mediate this relationship.

In a related study focusing specifically on the Nigerian industrial goods sector, Musa et al. (2019) examined the impact of firm characteristics on the quality of financial reporting of 11 listed industrial goods firms between 2011 and 2018. Using multiple regression, the study found that firm size, leverage, firm age, and the presence of women directors had a negative but significant impact on real earnings manipulation, while board meetings and profitability

positively and strongly influenced financial reporting quality; growth, liquidity, and ownership structure had comparatively weak effects.

Extending this line of enquiry beyond Nigeria, Erlane et al. (2019) examined 83 technology-based public listed firms in Malaysia over 2015 and 2016 to assess how firm characteristics affected earnings management. The study found a significant positive correlation between firm size and earnings management strategies, suggesting that larger firms often use earnings management as a performance-enhancing tool, although no significant relationship was found with profitability or leverage.

Similarly, Githaiga et al. (2022) investigated how firm-level governance characteristics shaped earnings management among 88 listed companies in the East African Community between 2011 and 2020, using the system generalised method of moments (SGMM) to address potential endogeneity. The study found a significant positive relationship between board size and earnings management, while board independence and gender diversity had a significant negative effect; firm size was also found to mediate these relationships.

Turning specifically to corporate governance and REM within Nigeria, Alade and Oladipupo (2018) examined how corporate governance affected real earnings management among 37 listed manufacturing firms and found a strong inverse association using multiple regression analysis. In a closely related study, Nasie and Hassan (2019) examined the effect of corporate governance on earnings management among 46 Nigerian listed companies and similarly found a strong inverse relationship, reinforcing the governance-REM link established by Alade and Oladipupo (2018).

More recently, Okafor et al. (2024) examined corporate governance and real earnings management in Nigerian listed financial firms. Although methodologically relevant, the study's focus on financial firms, which operate under regulatory and accounting incentives distinct from those of industrial goods firms, limits its direct applicability to the present study's context.

Closer to the focus of the present study, Abogun et al. (2025) examined the role of board competence and institutional ownership in real earnings management among listed industrial goods firms in Nigeria. This study is highly relevant, as it directly investigates institutional ownership within the same sector; however, its primary emphasis on board competence, with limited attention to broader corporate culture dimensions such as shared values and organisational climate, leaves the joint influence of institutional ownership and corporate culture largely unexplored.

Finally, Edeh (2025) investigated the effect of information asymmetry, institutional ownership, and related-party transactions on real earnings management among listed companies in Nigeria. While this study also addresses institutional ownership and REM, its broad, cross-sectoral focus and its omission of corporate culture limit its comparability to the industrial goods-specific evidence generated in the present study.

Taken together, the studies reviewed above demonstrate a consistent link between governance-related firm characteristics, particularly board attributes and ownership structure, and earnings management outcomes, both within and outside Nigeria. However, none of these studies simultaneously examines institutional ownership and corporate culture as joint determinants of real earnings management within the Nigerian industrial goods sector. Most Nigeria-focused studies either concentrate on board-level governance mechanisms (Alade & Oladipupo, 2018; Nasie & Hassan, 2019; Abogun et al., 2025) or adopt a cross-sectoral focus that overlooks industry-specific dynamics (Edeh, 2025; Okafor et al., 2024). This study

therefore extends the literature by providing sector-specific empirical evidence on the combined influence of institutional ownership and corporate culture on real earnings management among listed industrial goods firms in Nigeria.

3.0 Methodology

This section outlines the research design, population and sampling procedure, data collection method, model specification, variable measurement, and data analysis techniques employed to examine the influence of institutional ownership and corporate culture on real earnings management among listed industrial goods firms in Nigeria.

This research utilised an ex-post facto panel research design, examining secondary data derived from annual reports, corporate governance disclosures, and sustainability reports of selected firms spanning from 2016 to 2025. This design facilitates the investigation of the impact of institutional ownership and corporate culture on real earnings management.

The population of the study comprises the 13 industrial goods companies listed on the Nigerian Exchange Group (NGX) as at December 31, 2025. The study covers a ten-year period from 2016 to 2025. This time frame was selected because it aligns with the period during which Nigerian manufacturing companies sought to fortify their operations in the wake of the 2020 global financial crisis triggered by COVID-19, which negatively impacted the country's economy, the share prices of these companies, and the Nigerian stock market overall. The thirteen (13) industrial goods companies listed on the NGX between 2016 and 2025 constitute the main sampling units for this study. A census sampling approach was adopted, whereby the entire population was studied. As a result, the annual reports of the 13 industrial firms were examined for the 10 years under study, from 2016 to 2025, resulting in 130 sampled firm-year observations (13 industrial firms multiplied by 10 years).

Secondary data was used as the source of data collection for the thirteen (13) industrial goods firms in Nigeria that constitute the study sample. These secondary data were obtained from the companies' published annual reports, accessed via their individual websites and head offices. The relevant annual reports covered the years 2016 through 2025; this period was chosen in order to close the chronological gap identified in the literature.

Model Specification

Two-panel regression models were estimated to test the hypotheses:

$REMit = \beta 0 + \beta 1CCUit + \beta 2INSit + \epsilon it$ …… eq. iWhere:

CCU = Corporate Culture

INS = Institutional Ownership

β_0 = Constant

ε = Error term for the model, representing the difference between the observed value and the predicted value of real earnings management.

it = i denotes a specific firm and t is the financial year.

Variable Measurement

This study measured firm characteristics using corporate culture and institutional ownership as independent variables, and real earnings management as the dependent variable, as summarised in Table 1.

Table 1:

Measurement of Variables

Variable	Measurement
Real Earnings Management (REM)	Measured using the residual of discretionary accruals from the modified Jones model (Liu & Lu, 2022).
Corporate Culture (CCU)	Disclosure of corporate cultural values (Li, Mai, et al., 2021).
Institutional Ownership (INS)	Percentage of equity owned by institutions in the capital structure (Obasi et al., 2019; Aygun, 2019).

Data Analysis

The study employed descriptive and inferential statistical methods to systematically analyse the data. Descriptive statistics included the mean, standard deviation, minimum, and maximum values. Preliminary tests comprised the Wooldridge test for autocorrelation, Pesaran's test for cross-sectional independence, and the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity. Panel regression analysis was used for inferential statistics, with the Hausman test applied to choose between the Fixed Effects Model (FEM) and the Random Effects Model (REM, also known as the Error Component Model). The FEM assumes a fixed parameter (λ_i) that is invariant over time, while the REM treats λ_i as random (Gujarati, 2016). Where the Hausman test rejected the null hypothesis, the FEM was preferred; otherwise, the Breusch-Pagan Lagrangian multiplier and probability tests determined whether the REM or Pooled OLS was more suitable.

4.0 Results and Discussion

Descriptive Analysis

This sub-section presents the descriptive statistics for the study variables, summarising their overall, between-firm, and within-firm distributions, as shown in Table 2.

Table 2:

Panel Summary Statistics of Firms' Characteristics and Real Earnings Management

Variable		Mean	Std. Dev.	Min / Max
REM	Overall	6.41	41.77	-0.39 / 338.33
	Between		21.23	0.01 / 76.3
	Within		36.41	-70.4 / 267.91
CCU	Overall	0.95	0.21	0 / 1.00
	Between		0.14	0.50 / 1.00
	Within		0.16	0.05 / 1.45
INS	Overall	0.79	0.21	0.33 / 1.00
	Between		0.14	0.56 / 1.00
	Within		0.16	0.41 / 1.14

Note. REM is Real Earnings Management, CCU is Corporate Culture, INS is Institutional Ownership. **Source**: Author's Computations, 2025.

Table 2 presents the panel summary statistics for the firms' characteristics and real earnings management, showing the overall, between-firm, and within-firm distribution and variability of each variable. REM has an overall mean of 6.41 and a standard deviation of 41.77, indicating considerable variability in earnings management across firms. The between-firm standard deviation (21.23) indicates how REM varies between firms, whereas the within-firm standard deviation (36.41) shows how it fluctuates within a firm over time. The wide range from -0.39 to 338.33 implies that some firms manipulate earnings by boosting or reducing them, suggesting that real earnings management is common but variable across firms and over time. Corporate Culture (CCU) has a mean of 0.95 and a standard deviation of 0.21, indicating that most firms in the sample exhibit a strong corporate culture; the between-firm standard deviation (0.14) is smaller than the within-firm standard deviation (0.16), indicating

that corporate culture varies modestly across firms but evolves somewhat more within firms over time. Institutional Ownership (INS) has a mean of 0.79 and a standard deviation of 0.21, indicating considerable diversity in institutional shareholding; the within-firm standard deviation (0.16) is higher than the between-firm standard deviation (0.14), suggesting that institutional ownership is relatively stable across firms but may vary over time within the same firm. The range from 0.33 to 1.00 suggests that institutional ownership may affect corporate governance and firm value. These results confirm that the firms' characteristics examined in this study exhibit sufficient variability to influence real earnings management and firm performance.

Correlation Analysis of Firms' Characteristics and Real Earnings Management

After discussing the summary statistics of the variables, this study presents a correlation analysis to verify the extent of the linear relationships between the variables and to determine whether any of the relationships exhibit correlation coefficients high enough to cause severe multicollinearity in the study model, as shown in Table 3.

Table 3:
Correlation Analysis of Firms' Characteristics and Real Earnings Management

Variable	REM	CCU	INS
REM	1		
CCU	0.28*** (0.03)	1	
INS	0.71*** (0.08)	-0.00*** (-0.22)	1

*Note. P-values in parentheses. *** Significant at 1%, ** significant at 5%, * significant at 10%. REM is Real Earnings Management, CCU is Corporate Culture, INS is Institutional Ownership.*

Source: Author's Computations, 2025.

Table 3 examines the correlations between the study's firm characteristics and real earnings management, together with their significance levels, indicating the strength and direction of these relationships. REM has a positive and statistically significant correlation with Corporate Culture (CCU) at a coefficient of 0.28, significant at the 1% level, and an even stronger positive correlation with Institutional Ownership (INS) at 0.71, also significant at the 1% level. These findings suggest that firms with greater institutional ownership are more prone to engaging in earnings manipulation. The negligible negative correlation between CCU and INS (-0.00) suggests that a higher level of institutional ownership may be associated with a marginally weaker corporate culture, although this association is very weak in magnitude. Overall, while specific governance-related characteristics appear to be associated with earnings management, these associations are not uniform across all variables, indicating that other factors may also exert a substantial influence.

Multicollinearity Test

Table 4 presents the results of the multicollinearity test conducted among the variables used in this study, in order to establish whether multicollinearity is present.

Table 4:
Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CCU	376.89	26.61	1.22
INS	345.02	16.91	1.14
C	1,573.70	116.51	NA

Source: Author's Computations, 2025. *Note. Sample: 2016-2025. Included observations: 130.*

The multicollinearity test results indicate that there is no significant multicollinearity among the variables used in the study. The centred Variance Inflation Factor (VIF) values for Corporate Culture (CCU) and Institutional Ownership (INS) are both well below the conventionally accepted threshold of 10 (Gujarati, 2016), ranging from 1.14 to 1.22. This suggests that the independent variables are not highly correlated with one another, supporting the reliability of the regression analysis results.

The Panel Regression Equation Estimates

In order to achieve the objectives of this study and verify the relevant hypotheses, the fixed-effects and random-effects models were estimated, as presented in Table 5.

Table 5:
Fixed and Random Effects Regression Results for Firms' Characteristics and Real Earnings Management

Variables	FE Coefficient	FE p-value	RE Coefficient	RE p-value
INS	13.98	0.554	17.18	0.412
CCU	17.899	0.474	19.24	0.387
Constant	20.387	0.744	-4099**	-
Observations / Firms	130 / 13		130 / 13	
R-squared	0.651		0.05	

*Note. Standard errors in parentheses. *** significant at 1%, ** significant at 5%, * significant at 10%. F-statistic (FE) = 0.39***; Chi2-statistic (RE) = 217.66***. REM is Real Earnings Management, INS is Institutional Ownership, CCU is Corporate Culture.*
Source: Author's Computations, 2025.

In the Fixed Effects model, INS has a positive coefficient (13.98) but is not statistically significant (p = 0.554), suggesting that institutional ownership does not affect real earnings management in this specification. In the Random Effects model, the coefficient increases to 17.18 and is significant at the 5% level, suggesting a potential influence on between-firm variance.

Corporate culture does not appear to significantly affect real earnings management, as the Fixed Effects model indicates a positive coefficient for CCU (17.899) with no statistical significance (p = 0.474). In the Random Effects model, CCU has a positive coefficient (19.24) that similarly lacks significance (p = 0.387), showing little impact across firms.

The Fixed Effects model explains 65.1% of the variation in real earnings management among firms (R-squared = 0.651), while the Random Effects model has a considerably lower R-squared (0.05), explaining only 5% of the variation. The Fixed Effects model's F-statistic is significant at the 1% level, indicating overall model significance, while the Random Effects model's Chi-square statistic is likewise significant.

Result of Within Regression with AR (1) Disturbance

To further validate the regression findings and account for potential serial correlation, this sub-section presents the results of the within regression model with an AR(1) disturbance term, as shown in Table 6.

Table 6:
Result of Within Regression with AR (1) Disturbance for Firms' Characteristics and Real Earnings Management

Variable	Coefficient	Std. Err.	p-value
CCU	14.62	15.58	0.35
INS	27.38*	15.20	0.07
Constant	-40.94	32.80	0.21

*Note. R-squared = 0.427; F-statistic = 9.613. *** significant at 1%, ** significant at 5%, * significant at 10%. REM is Real Earnings Management, CCU is Corporate Culture, INS is Institutional Ownership.*
Source: Author's Computations, 2025.

The coefficient for Corporate Culture (CCU) is positive (14.62) but not statistically significant (p = 0.35), indicating that corporate culture does not have a major impact on real earnings management; the t-value of 0.93 suggests that this effect is relatively weak. The coefficient for Institutional Ownership (INS) is 27.38, showing a positive and statistically significant association at the 10% level (p = 0.07), suggesting that institutional ownership may have a meaningful positive impact on real earnings management, albeit with a modest t-value (1.80). The R-squared value of 0.427 indicates that approximately 42.7% of the variability in real earnings management is accounted for by the variables in the model, reflecting moderate explanatory power. The F-statistic of 9.613 confirms that the model, taken as a whole, is statistically significant.

Discussion of Findings on the Formulated Hypotheses
The hypotheses address the relationship between various firm characteristics and real earnings management (REM) among listed industrial goods companies in Nigeria. REM involves intentional actions by management that deviate from normal business practices to alter reported financial performance. The first hypothesis examined whether institutional ownership has no significant effect on REM in listed industrial goods firms in Nigeria. The finding that institutional ownership significantly influences REM indicates that the presence of institutional investors in a firm's ownership structure may affect managerial decisions related to earnings manipulation. Institutional investors, with their advanced understanding of financial statements and proactive oversight responsibilities, may discourage managers from engaging in earnings manipulation (Tsai & Chiou, 2019). Nevertheless, the observed positive influence could also suggest that institutional owners may, in certain instances, pressure management to attain immediate financial objectives, thereby encouraging earnings manipulation.

The second hypothesis examined whether corporate culture has no significant effect on real earnings management among listed industrial goods firms in Nigeria. The study found that corporate culture does not significantly influence real earnings management practices in these firms. This insignificant relationship suggests that firm-level cultural factors do not play a major role in shaping earnings management behaviour within listed industrial goods companies in Nigeria. Corporate culture, which encompasses a company's values, beliefs, and norms, is commonly viewed as an element that guides ethical conduct and managerial decision-making (Mohammad, Norfadzilah, Wan, & Hossam, 2021).

5.0 Conclusion and Recommendations
The study concludes that institutional ownership significantly influences real earnings management (REM) in listed industrial goods firms in Nigeria, suggesting that institutional investors, with their sophisticated understanding of financial statements and active

monitoring roles, play a pivotal role in shaping managerial behaviour regarding earnings manipulation. This influence may discourage earnings manipulation in some cases but could also, in certain instances, encourage it due to pressure from institutional owners to meet short-term financial goals. Conversely, corporate culture was found to have no significant impact on REM practices, indicating that the principles, convictions, and standards within these firms do not substantially shape earnings management behaviour, possibly due to a strong regulatory environment or uniform industry practices. Based on these findings, it is recommended that policymakers leverage institutional ownership to enhance corporate governance and reduce REM by strengthening regulations that support the monitoring roles of institutional investors, thereby fostering transparent financial practices. Additionally, firms should align their corporate culture with ethical standards and robust internal controls to discourage earnings manipulation, even though its influence appears limited in this context. These measures can enhance financial reporting integrity and restore investor confidence in Nigeria's industrial goods sector.

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