

Nigerian Public Manufacturing Companies' Financial Performance and Earnings Management.

¹Clifford Obiyo Ofurum

Department of Accounting, University of Port Harcourt

²Etonye Oyintonefie

Department of Accounting, University of Port Harcourt, Nigeria

³Ikebujo, Ogechi Salome

Department of Accounting, University of Port Harcourt

*** Professor C. O. Ofurum is a professor of accounting and finance, while Etonye Oyintonefie and Ikebujo Ogechi are accounting research students.*

Abstract

This study examined profit management and publicly traded Nigerian manufacturers' financial performance. The Nigerian Stock Exchange portal and selected manufacturing companies' annual reports provided the data. The ordinary least-square method of data analysis was adopted. Pearson correlations were also made to determine the moderating effect of enterprise size on the relationship between the discretionary management of accrual accounting, the management of real earnings, and value-added. Discretionary accruals management and economic value added correlated positively and statistically. Economic added value was positively but insignificantly associated with actual earnings management. However, real earnings management does not appear to affect economic addition for Nigerian manufacturing companies. Thus, we advised against earnings management by managers. Managers should ensure they can achieve the desired outcome before implementing revenue management for the organisation's benefit.

Keywords: *Economic value, discretionary accrual accounting, real earnings accounting*

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I. Introduction

Management of earnings is intentional. Bruns and Merchant (1990), cited in Bellovary et al. (2007), define earnings management as management's use of accounting techniques to manipulate reported earnings. Ibrahim et al. (2022) described earnings management as manipulating accounting standards and corporate laws or structuring activities to impact expected firm value. Corporate performance depends on their ability to meet goals, which determines the organisation's and stakeholders' financial and economic success. The organisation will gain resources for survival and growth if it achieves its goals well. Failure may cause contraction or liquidation. Thus, stakeholders pressure corporations to produce "acceptable" results.

Business analysts expect industry-standard returns from the company. Governments and agencies closely monitor the company for taxation, regulation, antitrust, and growth. Employees, creditors, vendors, and suppliers have expectations, too. Due to stakeholder pressures, accounting law, and loopholes, accountants may manage earnings. Earnings management smooths the bottom line and boosts investor confidence in businesses. Earnings management is legal. Because it fails to present a fair and objective picture of the company, it is considered unethical. Earnings management may involve overstating/understating assets, increasing/decreasing expenses, changing depreciation methods, consciously mistiming revenue/expenses, and presenting provisions as an asset (Remenarić et al., 2018). Matsuura (2008) divided earnings management into accruals and real. Non-discretionary accruals, such as unpaid taxes and bills, result from an entity's normal business activities and are recognised within the appropriate period. Earnings are unmanaged. Accounting practices deviate from the rules when preparing and presenting financial information to achieve the desired result in abnormal or discretionary accruals. Earnings management uses accounting standards' loopholes and flexibilities.

Entities use loopholes to boost financial metrics despite accounting standards. Monteiro et al. (2022) identify four earnings management methods. Permitted alternative accounting policies first. For instance, capitalising or expensing high costs. The capitalisation will amortise the cost over an extended period than an immediate write-off, which will hurt earnings immediately. Second, by making bottom-line accounting

estimates with skewed judgement. Depreciating an asset's useful life. Third, by structuring or recognising transactions to manipulate financial statements. Finally, by manipulating accounting results by timing authentic transactions. For instance, recognising revenue or expenses as having occurred in a prior accounting period to increase or decrease earnings in the current accounting period (Amat Salas et al., 2000).

The erring organisation's revenue management strategy depends on the desired outcome. Some of these activities may be motivated by the need to save the organisation from an impending crisis. In contrast, others may be motivated by owners' or management's greed to earn higher bonuses and other benefits. According to Ali Shah et al. (2011), revenue management is a weapon. If used properly, it can benefit the users, but if mishandled or stolen, it can harm them. Earnings management had prevented more crises than it had caused, they claimed.

Problem Statement

Recent corporate failures have been caused by financial statements that did not indicate financial distress. Some financial statements showed huge profits that were fake. One of Nigeria's most notable cases is Cadbury Nigeria PLC (Oghojafor et al., 2012). In its financial and accounting reports, the company inflated its earnings by millions of Naira, according to an independent investigation. For years, earnings management overstated profits by N1 billion to N2 million. This practice forced the company to reduce its reserve by between N13 billion and N15 billion in a one-time exceptional charge in 2006. (Atu et al., 2016). According to the Nigerian Deposit Insurance Corporation (Agwu et al., 2014), Nigerian banks are engaging in more fraudulent financial practices. Intercontinental and Oceanic banks were liquidated in 2010 after corporate scandals implicated their CEOs in fraud and financial wrongdoing. Skye Bank was acquired by the Central Bank of Nigeria (CBN) and renamed Polaris Bank after the diamond bank failed. African Petroleum PLC and Lever Brothers (Nig) PLC are two more Nigerian financial fraud cases (Okougbo & Okike, 2015). The 2001 privatisation of African Petroleum PLC revealed that its financial statements misrepresented its financial position. The financial statements omitted several transactions, including large loans. A due diligence audit before the company's privatisation revealed this (Oyejide & Soyibo, 2001). Undoubtedly, this issue is global. Enron Corporation in the US used accounting loopholes to hide billions of dollars in bad debt while inflating its earnings for years. Gains were recorded for transactions without economic substance. Loans were recorded as deferred revenue rather than borrowings, allowing the company to record the proceeds as operating cash flow rather than financing cash flow. Liabilities were excluded from the balance sheet. One year after the Enron scandal, WorldCom, another US-based company, was found to have inflated its assets by nearly \$11 billion. Capitalising line costs instead of depreciating them understated line costs and overstated revenues.

This study will follow two hypotheses.

Ho1: Discretionary accruals management does not affect quoted manufacturing firms' economic value added in Nigeria.

Ho2: Nigerian publicly traded manufacturing companies' economic value added is unaffected by real earnings management.

Existing and empirical literature review

Several academics have studied earnings management, which has become popular among accounting information users. An essential item in financial statements is earnings, also known as "bottom line" or "net income." A company's theoretical stock value is its future earnings' present value (Makee Mahmood Albanaa & Al Shammarei, 2022). Earnings are used by shareholders to evaluate managers, forecast cash flows, and assess risk, according to Ronen and Yaari (2008). Francis et al. (2008) found that earnings are more closely related to stock prices than cash flows, sales, and other financial statement data. Customers may use earnings to determine whether products and services will be provided in the future. In contrast, employees may use earnings to assess an organisation's prospects and job security, according to Goncharov (2005).

Hicks' 1939 concept of earning management shows that "true earnings" cannot be observed accurately. Multiple GAAP interpretations suggest earnings can be manipulated and managed. Later researchers have defined earnings management differently, but there is no consensus in the literature (Dechow et al., 2010; ALTINTAḥ et al., 2017). Earnings management's definition depends on how it's viewed. According to proponents, earnings management is how managers improve the company's financial position (Healy & Wahlen, 1999). Earnings management is seen as manipulating earnings to profit or showing company performance by those who dislike it. It also reduces shareholder and investor wealth Ronen and Yaari (2008). (Bergstresser & Philippon, 2006). Management's intervention in external financial reporting for private gain was defined by Schipper (1989). He claims that earnings management is when management knowingly interferes with the financial reporting process to achieve a specific level of earnings to impress financial information users. In their 1994 study, Rosenzweig and Fischer define earnings management as all actions that increase or decrease a company's reported income but do not affect its long-term profitability.

Kusumaningtyas and Yendrawati (2015) define earnings management as company managers' ability to choose accounting methods and procedures to meet goals. According to this definition, managers choose accounting methods that give them an advantage and show the company's success. Managers use discretion to structure transactions to manage earnings, according to Nwaobia et al. (2019). These actions may alter financial reports to mislead stakeholders about the company's economic performance or influence contractual outcomes that rely on reported financial information. Accounting literature defines earnings management in four ways, according to Muljono and Suk (2018). In terms of management intent, earnings management is a deliberate intervention in the external financial reporting process to obtain a private gain (Francis et al., 2008); (Cormier et al., 2013); & Alareeni and Aljuaidi (2014). (Bagnoli & Watts, 2000). Management intent is unobservable with this strategy. No one knows if earnings are manipulated for management or information users. Accounting number attributes cannot directly measure or operationalise the unit's earnings management.

Results reporting reflects management's wishes rather than the underlying financial performance of the business" in managing results (Tian & Peterson, 2016). In other words, earnings management manipulates reported earnings to misrepresent economic earnings at every point (Susanto et al., 2017). Earnings management cannot be directly measured because of information asymmetry. Ruwanti et al. (2018) and Cormier et al. (2013) define earnings management as management discretion over accounting numbers, with or without constraints. Earnings management for Levitt means using accounting's flexibility to keep up with business innovations (Davis et al., 2002). Earnings management is primarily creative accounting. Earnings management is legal if management has control over accounting numbers and flexibility. Because a control group for "earnings management" is unlikely, this definition of management reporting discretion is empirically problematic. Rational and resourceful managers must report using their preferred method.

Earnings management definitions apply accounting standards in two ways. First, earnings management is companies misusing accounting standards. Misapplication is misusing something (Ning, 2009). Turner and Johnson define earnings management as using accounting standards (within accounting standards or legitimately) incorrectly or for the wrong purpose. Similar views are held by Dechow et al. (2010). (a) Fraudulent accounting, (b) earnings management, and (c) legitimate accounting discretion are identified. They explained that accounting standards permit both practices (b) and (c), but management intent distinguishes them: if the practice is intended to mislead, it is (b); otherwise, it is (c). Earnings management, according to Magrath and Weld (2002), is legal and intended to deceive information users. Legal practice isn't shameful, even though the intent is unobservable. Earnings management, the second definition derived from this approach, involves taking deliberate actions within accounting standards to achieve a desired level of reported earnings (Brown, 2014). Thus defined, paper earnings management is empirically quantifiable. In conclusion, the four definitions of earnings management explain why earnings are manipulated, what has been abused, how earnings are used, and the legitimacy of manipulating earnings in that order.

Cyril et al. (2020) examined how earnings management affected Nigerian consumer goods firms' financial performance using an ex-post facto research design. Using a simple regression analysis, they found that earnings management does not affect Nigerian consumer goods companies' financial performance. Financial leverage and earnings management in Nigerian manufacturing firms were examined by Tonye and Sokiri (2020). Secondary data from selected companies' annual financial reports were analysed using Ordinary Least Squares (OLS). The findings showed that manufacturing firms use earnings management. Indonesian earnings management and financial performance were examined by Pernamasari et al. (2020). Consumer goods firms' performance and earnings management were used to analyse stock prices. ROA and D/E were used as profitability proxies to assess the firm's performance (DER). Actual working capital accruals were the proxy for earnings management. The study found that company performance significantly boosted stock prices. The study found that investors were concerned about company financial statements, mainly information about profits and debt used for operations. Earnings management can affect stock prices, but not significantly. Olatunji and Juwon (2020) examined the relationship between accrual-based earnings, real earnings management, and publicly traded Nigerian manufacturing companies' firm value. Accrual-based earnings management was positively associated with a company's return on equity, according to panel least square regression research using pooled, fixed, and random effects with various diagnostic evaluation methods (ROE). The firm's return on equity was negatively correlated with real earnings management. As shown by individual publicly traded manufacturing companies, accrual-based and real earnings management affected return on equity. Real-based and accrual-based earnings management decreased return on equity. Earnings management benefits account manipulators, according to this study. It should be noted that the ease of detecting accrual earnings management can affect investors' company valuation.

Earnings management's impact on Nigerian companies' profitability was examined by Ibrahim et al. (2022). 84 NSE-listed firms with 756 firm-year observations from 2010 to 2018 were studied using panel data. Data were analysed using multiple regression. As measured by ROA, Profitability is significantly and positively related to earnings capacity. Based on this result, listed companies' profitability will increase proportionally to their earnings capacity. The result also suggests that earnings-managed companies are more profitable. Earnings

management behaviour was examined by Vera (2020). They used E-Views to analyse data from Indonesia Stock Exchange-listed firms from 2014 to 2018. The study found that firm characteristics significantly improve earnings management behaviour. Only the four largest auditors are significant for good corporate governance. According to the research, investors should enforce governance and monitoring mechanisms to reduce earnings management. Accrual-based earnings management, real activities management, and corporate cash holdings were examined by Khuong et al. (2020). The results showed that real activities management increases cash on hand, while accruals-based earnings management decreases it. The positive relationship between real earnings management and cash on hand suggests that significant decreases in discretionary production costs and selling expenses allow managers to conceal the firm's actual performance, increasing information asymmetry. The inverse relationship between accruals-based earnings management and cash holdings may show that accruals can help reduce information gaps between the company and its stakeholders.

Earnings management may mediate agency cost and debt-to-equity's effects on a company's financial performance, according to Irawati et al. (2020). Structural equation modelling-partial least squares (SEM-PLS) using Warp PLS software and secondary data from the Indonesian Capital Market for 2012–2016 is used in this study. The Indonesian Capital Market sampled 22 listed companies. Earnings management was significantly correlated with agency cost but not financial performance. Free cash flow hurt financial performance but not earnings management. The debt-to-equity ratio negatively impacted earnings management, but the financial performance was unaffected. Nasiri and Ramakrishnan (2020) examined whether Bursa Malaysia-listed companies' corporate governance affects earnings management and performance. Panel data analysis and FTSE Russell data were applied to the 2011–2015 FTSE Top 100 Bursa Malaysia constituents using the intersection method. The results show that DAs significantly impact the ROA, ROE, Tobin's Q, and EVA of companies with poor governance. Poorly managed companies' managers are more likely to abuse their accounting authority, which lowers corporate performance, according to research. Managers are more likely to use DAs to modify financial profits, but this will have a much more significant negative impact on corporate interest in the future. In a good governance structure, DAs boost firm performance.

Khan et al. (2020) examined the drivers of earnings manipulation. Managerial decisions made when reporting financial earnings are called earnings management. During a downturn, it protects the firm's finances. Earnings manipulation is driven by firm size, profitability, financial leverage, and effective tax rate. The study found that managers can use the current year's expected earnings to maintain a company's positive image when profits decline. Managers will report incorrect numbers if a company finances its capital with debt. Earnings management was explained by firm size and tax rate's adverse but insignificant effects. Augustine and Dwianika (2019) examine how a company's size, managerial ownership structure, and profitability affect earnings management. This study used 20 Indonesian Stock Exchange-listed manufacturing companies from 2015 to 2016. Earnings management was affected by profitability but not firm size or managerial ownership structure. The study found that information asymmetries and green intellectual capital perfectly mediate the relationship between company size, managerial ownership structure, and profitability. Hoang and Phung (2019) examined the effects of real activities earnings management on energy-listed companies in Vietnam. Twenty-nine stock-listed energy companies were represented in the data from 2010 to 2016. Regression analysis, the fixed effects model for panel data, and the random effects model showed that earnings management improves firm performance. Increased sales should boost earnings, according to this finding. The company may suffer from this. Firm leverage and tangible assets negatively correlate with firm performance, while firm size, cash from operating activities, growth opportunities, and performance positively correlate. Research findings are crucial for emerging market regulators and investors.

Earnings management affects Nigerian manufacturing firms' survival, according to Nwaobia et al. (2019). Thirty of the 66 listed manufacturing companies with complete data for the study were chosen from 2005 to 2016, and secondary data from their published financial statements were used. The data were analysed using descriptive and inferential statistics (OLS regression). According to this study, earnings management (EM) proxied by discretionary accruals and corporate governance (CG) proxies significantly affected corporate survival. A company's survival was affected differently by EM and CG proxies. Earnings management and quoted Nigerian manufacturing firms' performance were examined by Olotu et al. (2019). Randomly selected were 56 NSE-listed companies with usable data. The data were analysed using descriptive and inferential statistics (correlation and multiple regression). AEM and REM jointly influenced only inventory turnover out of the three performance measures used in the study. The study found no evidence that earnings management boosts company performance. Earnings management and IPO performance in India were examined by Mangala and Dhanda (2019). The modified Jones Model was used in the study. Earnings management in Indian IPOs is much higher than in developed countries. IPO companies' earnings performance is abnormally high in the IPO year compared to the period after the offering, according to the study. India's post-issue earnings performance is driven by issue-year earnings management. Good corporate governance and earnings management mechanisms affect financial performance, according to Nuryana and Surjandari (2019). The study selected 25 Indonesia Stock Exchange-listed manufacturing companies by purposively sampling reports from 2012 to 2016. Multi-

and single-regression were used to analyse the data. The results showed that none of the good corporate governance board mechanisms affected earnings management. Both good corporate governance and earnings management affect financial performance. Management of real earnings affects a company's profitability, according to Fazal et al. (2019). The study used secondary data and a correlational design. Two hundred fifty companies from the "Top 500 Companies listed on the Bombay Stock Exchange" were selected for the analysis. The results showed that managing real earnings practices hurts company performance and market value. According to the study, intensive real earnings management practices negatively impact the firm's performance and stock price the following year. Managers benefit from sound financial earnings by transferring future gains to the present through real earnings management.

Aguguom et al. (2019) examined earnings persistence's efficacy and value relevance, its impact on firm performance, and the implications of analysts' accurate forecastability from Nigeria. The effect of persistent gains on business performance was examined using regression statistics from descriptive and panel data. Earnings persistence negatively impacted firm performance, according to Tobin's Q. Leverage (LEV) was positive. The findings showed a weak growth trend between EPERS and Tobin's Q, but firm size (FRMSIZE) was negatively related. As a result, the study advised analysts to consider earnings consistency when assessing reported financial statements to avoid making inaccurate predictions. Earnings Quality's impact on Nigerian manufacturing firms' growth from 1996 to 2006 was examined by Nwaobia et al. (2019) using an ex-post facto research design. According to the study (TUG), earnings quality significantly affected revenue growth. EPRE negatively impacted earnings quality proxies. Value Relevance (VALR) and Accounting Conservatism (CONS) had a significant positive impact on firm turnover growth, while Accrual Quality (AQUA) had a negligible negative impact. Earnings quality affects business growth, according to the study. Earnings management affected 311 French firms' financial performance, according to Ben Amar and Chakroun (2019). ROA, ROE, Tobin Q, and Marris ratio were used in the methodology. All regressions are estimated using panel data. EM hurt financial performance when ROA and ROE were applied. When using the Tobin Q and Marris ratios, this effect becomes positive. The empirical findings show that investors' views of the company's future differ between the two approaches. Management can affect financial performance in two ways in France: "opportunistic earnings management" and "signalling earnings management." Theophilus Rufus Akintoye and Oyesola Salawu (2018) examined the trend and impact of earnings quality on firms' financial performance from the perspective of accounting information usefulness, aiming to resolve a missing link between current and expected firm performance due to the gap between managers and investors on information asymmetry and opportunistic earnings tendencies, improving managerial and investment decisions and forecasting abilities. The audited financial statements contained panel data. Descriptive and inferential statistics were used in these models. The firm's financial performance was significantly affected by earnings quality proxies. Earning persistence increased Tobin's Q, while accounting quality, earnings predictability, and earnings smoothing decreased it. Analysts, investors, policymakers, and other stakeholders should use the earnings consistency of the time-series behavioural pattern of earnings as measured by predictability and persistence to guide managerial and investment decisions and earnings forecasting, according to the study. Accrual-based earnings management affected Nigerian deposit money banks' financial reports, according to Umoren et al. (2018). Despite clean audit reports, corporate collapse and banking sector failures prompted the research. Based on descriptive and inferential statistics, a random sample of ten deposit banks was selected for eight years. Discretionary accruals before and after IFRS negatively affected Nigerian deposit money banks' returns on assets. DMBs' financial performance was also linked to accrual-based earnings management.

II. Methodology

Ex post facto design was used in this study. The study included 42 Nigerian stock exchange-listed manufacturing companies. However, due to incomplete data from some companies, a judgemental sampling technique was used to arrive at a sample size of thirty-four (34) manufacturing companies with complete data/information. The following variables are operational:

Managing Accruals

Although cash has not yet changed hands, accruals affect a company's net income on the income statement. Accruals affect the balance sheet because they involve non-cash assets and liabilities. Accrual-based earnings management hides economic performance by applying accounting methods or estimates within accounting standards.

The modified Jones model is the best way to quantify accruals-based earning management in specific companies. Dechow et al. (1995) developed it to eliminate the Jones Model's tendency to mismeasure discretionary accruals when discretion is exercised through non-cash revenues (account receivables). It's calculated as follows:

$$TA = \Delta CA - \Delta Cash - \Delta CL_t + \Delta DCL - DE$$

Where: ΔCA = Changes in current assets
 TA = Total Accruals
 $\Delta Cash$ = Changes in cash
 ΔCL = Changes in current liabilities
 ΔDCL = Change in debt included in current liabilities
 DEP = Depreciation and amortisation expense

From the Total Accrual (TA) as shown above, the non-discretionary accrual can be computed as shown in the formula below:

$$NDA_t = \alpha_1(1/A_{t-1}) + \alpha_2 [(\Delta REV_t - \Delta REC_t)/A_{t-1}] + \alpha_3(PPE_t/A_{t-1})$$

Where:

$$\Delta REC_t = \text{Changes in Net receivables}$$

$$\Delta REV_t = \text{Changes in Revenue}$$

Discretionary accruals are then derived as follows.

$$DA_t = TA_t - NDA$$

Real Earnings Management

Managers can manipulate earnings upwards or downwards through actual transactions Wang et al. (2010). Thus, managers can accelerate sales by increasing price discounts or credit terms. The additional sales will boost current period earnings. (Rowchowdhury, 2006) developed the model for calculating real earnings management (REM). This is calculated as follows:

For abnormal production costs:

$$PROD_t/A_{t-1} = \alpha_1(1/A_{t-1}) + \alpha_2 (S_t/A_{t-1}) + \alpha_3 (\Delta S_t/A_{t-1}) + \alpha_4 (\Delta S_{t-1}/A_{t-1}) + \varepsilon_t$$

For abnormal cash flow from operations and expenses:

$$CFO_t/A_{t-1} = \alpha_1 (1/A_{t-1}) + \alpha_2 (S_t/A_{t-1}) + \alpha_3 (\Delta S_t/A_{t-1}) + \varepsilon_t$$

For Discretionary Expenses (DISX):

$$DISX_{i,t} = \alpha_1 [1/(A_{i,t-1})] + \alpha_2 [S_{i,t-1}/(A_{i,t-1})] + \varepsilon_{it}$$

Where:

$$PROD_t = \text{Sum of cost of goods sold and change in inventory}$$

$$A_{t-1} = \text{Total assets in the year}$$

$$S_t = \text{Net sales and}$$

$$\Delta S_{t-1} = \text{Change in net sales.}$$

$$DISX = \text{Total discretionary expenditure during the period}$$

$$CFO = \text{Cash flows from operating activities in year t.}$$

From the above, real earnings management (REM) is calculated as follows:

$$REM = CFO(-1) + PROD(-1) + DISX(-1)$$

Where:

$$CFO = \text{Abnormal cash flows from operating activities}$$

$$PROD = \text{Abnormal production cost}$$

$$DISX = \text{Abnormal discretionary expenses}$$

Economic Value Added

Economic Value Added (EVA) was developed by Stern Stewart and Company (Stern, 1985); Trussell et al. (1995) to measure firms' profitability. It is a measure of incremental return that an investor earns over the market rate of return. In other words, Economic Value Added (EVA) is an estimate of actual economic profit or an amount by which the earnings exceed or fall short of a company's capital cost. The Economic Value Added of a firm can be defined as the change in Net Operating Profit after Taxes (NOPAT) minus the difference in the Cost of the Capital used to generate the Net Operating Profit after Tax. This is given as:

$$EVA = NOPAT - (Invested Capital * WACC)$$

Where:

$$NOPAT = \text{Net operating profit after taxes}$$

$$\text{Invested capital} = \text{Debt} + \text{capital leases} + \text{shareholders' equity}$$

$$WACC = \text{Weighted average cost of capital}$$

Methods of Data Analyses

The primary method of analysis adopted for this research effort is the Ordinary Least Square (OLS) Multiple Regression Analysis techniques.

Model Specification

The primary analysis method adopted for this research is the OLS multiple regression method. This is given as:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_nx_n + e_i \dots \dots \dots 1$$

Where

- y = Dependent or outcome variable
- a = Constant term
- $x_1, x_2, x_3 \dots x_n$ = Independent variables
- $b_1, b_2, b_3 \dots b_n$ = Coefficients of the independent variables
- e_i = Error term.

This research adopted the model utilised by Leung (2016). Similar models were also used by Cahyono et al. (2020), Fatzel et al. (2022), and (Saidu et al., 2017). The model by Cahyono et al. (2020) posits that financial performance is a function of earnings management measured using discretionary accruals (DACC). The above is represented as a functional equation thus:

$$\text{Financial Performance} = f(\text{Earnings Management}) \dots \dots \dots 2$$

Where

- Financial Performance = Economic Value Added (EVAL) and
- Earnings Management = Discretionary Accruals (DACC) and Real Earnings Management (REMT).

This functional relationship is proposed to test how earnings management practices affect the financial performance of manufacturing companies. However, in recognition that certain other factors can induce earnings management practices and significantly affect firm performance, as noted by Burgstahler and Chuk (2011), firm size (SIZE) is incorporated into the equation above as moderating variable. Thus, the above functional form in equation 2 is expanded as follows:

$$\text{EVAL} = f(\text{DACC}, \text{REMT}, \text{SIZE}) \dots \dots \dots 3$$

Thus, in this study, the following models will be used to test the proposed hypotheses:

$$\text{EVAL} = \beta_0 + \beta_1\text{DACC}_{(1,0)} + \beta_2\text{REMT} + \beta_3\text{SIZE} + \varepsilon \dots \dots \dots 4$$

Where:

- EVAL = Economic Value Added (Dependent Variable)
- DACC = Discretionary Accruals Management (Independent Variable)
- REMG = Real Earnings Management (Independent Variable)
- SIZE = Firm Size (Moderating Variable)

Model Results Regression

Regression Result Model

Dependent Variable: EVAL
 Method: Panel Least Squares
 Sample: 2005 2019: Periods included: 15
 Cross-sections included: 34: Total observations: 510

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	42.77968	116.0978	0.368480	0.7148
DACC	31.46830	2.920302	10.77570	0.0002
REMG	24.30746	16.00816	1.518442	0.1381
FSIZ	0.010529	0.001157	9.101913	0.2981

R² = 0.5393; Adjusted R² = 0.510393; F-Stat = 384.5181; Prob (F-Stat) = 0.04134;
 Durbin-Watson Stat = 1.9138

Source: Extraction from E-views

DACC and economic value added are positively correlated, according to the model (EVAL). A unit increase in discretionary accruals (DACC) is predicted to lead to a 31.46830 unit increase in economic value added (EVAL) and vice versa, according to the coefficient of regression (B). However, the variables' relationship is statistically significant because its P-value (0.0002) is lower than the 0.05% alpha level. Real earnings management (REMG) and economic value added (EVAL) had a coefficient of regression (B) of 24.30746. This suggests a positive correlation. Thus, a unit increase in real earnings management is predicted to increase economic value added (EVAL) by 24.3074 and vice versa. Although, the finding is not statistically significant because the probability value of 0.1381 was much higher than the acceptable confidence limit of 0.05. The moderating variable (FSIZ) had a positive and non-significant relationship with economic value added (EVAL), implying that increasing firm size (FSIZ) would improve financial performance in terms of economic value added (EVAL). B was 0.01052, and probability was 0.1043. In the global statistics section, the coefficient of determination was 0.5393, indicating that discretionary accruals (DACC), real earnings management (REMG), and firm size (FSIZ) account for 54% of economic value-added (EVAL) variations.

Ho1: Discretionary accruals management does not significantly affect quoted manufacturing companies in Nigeria's economic value added.

Ho1: Discretionary accruals management practice does not significantly affect the economic value added of quoted manufacturing companies in Nigeria.

Table 1 Hypothesis Three

Calculated t-Statistic	1.1387
Calculated Probability of t-Statistic	0.2554
Number of Observation	510
Degrees of Freedom	$v = N - k = 510 - 3 = 507$
Critical t-Statistic	1.962
Critical Probability of t-Statistic	0.05

In hypothesis one in table1, the computed t-statistic for the relationship between discretionary accruals and economic value added was 10.77570 with a probability of 0.0002. However, the critical t-statistic had a value of 1.962 and a critical probability of 0.05. The computed t-statistic (10.7757) is greater than the critical one (1.96). It rejects the null hypothesis. Thus, discretionary accruals management significantly impacts the economic value added of quoted manufacturing companies in Nigeria. This result is supported by the computed probability of the t-statistic value, which is lower than the critical (default) probability value.

Ho2: Real earnings management practice does not significantly affect the economic value added of quoted manufacturing companies in Nigeria

Table 2 Hypothesis Six

Calculated t-Statistic	1.51844
Calculated Probability of t-Statistic	0.0.1381
Number of Observation	510
Degrees of Freedom	$v = N - k = 510 - 3 = 507$
Critical t-Statistic	1.962
Critical Probability of t-Statistic	0.05

The computed t-statistic for the relationship between real earnings management and economic value added was 1.5184 with a probability of 0.1381. However, the critical t-statistic was 1.962, and the critical probability was 0.05. We find that the computed t-statistic is less than the critical one. Thus, the null hypothesis is accepted. Consequently, Nigerian quoted manufacturing companies' economic value added is not significantly affected by real earnings management practice. This result is supported by the computed probability of the t-statistic value, which is higher than the critical (default) probability of 0.05.

III. Results Discussion

Discretionary accruals management and economic value added were linked. The regression coefficient between Nigerian manufacturing companies' discretionary accruals management practises and economic value added is 31.4683. An increase of one unit in discretionary accruals practice is estimated to increase economic value added by 31,468 dollars. The result is statistically significant because the computed t-statistic was 31.4683, greater than the critical value of 1.93, and the significant P-value was 0.0002, less than the 0.05% alpha level. Economic value added measures the company's real value after all obligations, including debt repayment. Thus, earnings management through discretionary accruals management is short-term beneficial for the firm's investors. Few studies have examined earnings management's impact on economic value added. However, those that exist suggest mixed results. For instance, Qi et al. (2021) found a significant negative correlation between earnings management through discretionary accruals and economic value in European Union and North American Free Trade Agreement (NAFTA) nations. In Southeast Asian Nations (ASEAN) and newly industrialised countries (NICs) in Asia and South America, discretionary accruals positively correlated with economic value added. In China, Wang et al. (2015) found a significant positive relationship between earnings management through discretionary accruals (DAs) and adjusted, and unadjusted economic value added (EVA), supporting our findings in Nigeria.

Real Earnings Management and Added Economic Value

The data analysis showed that real activities earnings management and Nigerian manufacturing firms' economic value added were positively correlated. The regression coefficient was 24,307, indicating that manufacturing

firms' economic value added will increase with real activities management. Discretionary accruals, earnings management and economic value added are positively correlated. Like the previous one, this result is not statistically significant because the computed t-statistic value of 1.51844 is less than the critical value of 1.962. Qi et al. (2021) found a significant inverse (negative) relationship between real earnings management activities and economic value added for North American Free Trade Agreement (NAFTA) and European Union (EU) nations. As noted in previous analyses, real activities earnings management appears to affect financial performance depending on how it is measured. Earnings per share and added economic value positively correlate with real activities management.

Recommendations

We recommend:

First, managers must avoid earnings management for personal gain. Corporate governance, particularly the audit committee, can monitor managers' activities closely. To deter others, managers who engage in earnings management for personal gain should be severely punished. All else being equal, managers should clearly understand the desired outcome before starting earnings management, even if it benefits the company. Therefore, if the practice does not improve the company's financial performance, it may not be worth the effort. For instance, financial and statistical simulations with an acceptance/rejection criterion may help management decide if the practice should continue. Earnings management's short-term benefits may worsen future financial problems, so Nigerian manufacturing companies should avoid it. Finally, manufacturing companies in Nigeria should only use earnings management when necessary. Earnings management should only be used as a last resort to prevent financial problems that could threaten the company's survival.

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