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Unravelling the Profit Puzzle: How Chief Executive Officer Attributes Shape the Performance Sustainability of Nigerian Listed Firms

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ABSTRACT

This study examined the impact of Chief Executive Officers' attributes (age, gender and nationality) and performance sustainability (ROA, NPM) of listed firms in Nigeria. Secondary data was collated from listed firms in Nigeria's stock market from 2014 to 2023. The variables were subjected to diagnostic tests and descriptive tests and the research objective was achieved using panel ordinary least square regression. The results revealed that CEO attributes (age, gender, nationality and board size) significantly affect the performance of quoted firms in Nigeria. The study findings call for effective governance, strategic leadership practices as well as tailored management policy formulation within the Nigerian business environment. This study offers practical insights into how Chief Executive Officers' attributes can foster extended business success in emerging markets. These implications of the findings could further enlighten management decision-making and corporate governance as strategies to achieve sustainable performance in Nigeria either from revenue or profit perspective.

Keywords: CEO, Sustainability, Performance, ROA, Revenue
JEL Classifications: M21; M41; M3

1. INTRODUCTION

Firm performance is essential metric that draws investors and assesses the effectiveness of management's activities, operations and policies (Bui and Krajcsák, 2024). Over the decades, businesses encounter several revenue-related obstacles, including macroeconomic influences, sector-specific difficulties, and internal operational inefficiencies (Uña et al., 2023). These issues encompass exchange rate volatility, inflationary pressures, regulatory uncertainty, dependence on oil prices, risks within the banking sector, deficiencies in manufacturing and infrastructure, restrained consumer spending, constraints on capital accessibility, digital transformation and adoption challenges, cybersecurity threats and losses, costs associated with sustainability and ESG compliance, and internal governance issues.

To curb these issues, enterprises must implement strategic initiatives, enhance cost efficiency, embrace digital transformation, and strengthen governance to overcome these difficulties (Oladeinde et al., 2023). This includes managerial, economic, and organisational dimensions, emphasising a company's ability to use its managerial resources efficiently to attain its objectives for performance sustainability (Abid et al., 2024). The crucial impact of CEO traits on businesses in Nigeria is seen in the challenges faced in achieving sustainable success. Leadership skills, especially a profound comprehension of sustainability difficulties, are essential in assessing a company's ability to successfully adhere to sustainable standards (Bashynska et al., 2024).

These issues underscore the intricate landscape that CEOs must navigate, significantly influencing their effectiveness and the sustained success of their organisations. A CEO is crucial to a company's sustainability, enhancing immediate and long-term success (Ghardallou, 2022). Their decision-making authority, especially in operational and strategic domains, profoundly influences the firm's success. Competent directors or senior management with specialised knowledge are crucial for efficient administration and a favourable perception among investors. The CEO's attributes, such as education, experience, ethnicity, age, and gender, may influence the firm's success favourably and adversely (El Abiad et al., 2024).

Furthermore, as the Nigerian economy evolves amidst global shifts and domestic challenges, the ability of listed firms to maintain and enhance their performance over the long term has become very important. In Nigeria, like other emerging markets, the sustainability of firms is a dire concern for investors, regulators, and other corporate stakeholders. In recent times, the improper utilisation of internal attributes by Chief Executive Officers has posed a significant challenge for listed firms in Nigeria. This issue has resulted in deficient corporate growth, declining net profit margins, and negative capital-employed performance, raising concerns about the sustainability of these businesses (Okeke et al., 2025). This problem is underscored by the global significance of sustainability, acknowledged as a burning issue and a major concern across the globe (Iqbal et al., 2025).

The study is set out to investigate the key issues associated with performance sustainability in this context, which include evaluating Chief Executive Officers attributes (gender, age and nationality), all of which play critical roles in performance sustainability of firms in Nigeria. However, the existing literature reveals a substantial gap as academics persist in identifying certain and single CEO traits that independently affect firms outcomes; this study contend that an exclusive emphasis single CEO attribute offers an inadequate understanding of the association amid CEO attributes and firms outcome.

Furthermore, previous studies, such as those by George (2024) and Saeed et al (2025), have predominantly focused on broad Chief Executive Officers attributes, notably visionary leadership, leading to conflicting and inconsistent findings. Also, there has been diversity in research focus as researchers like Skorodziyevskiy et al (2024) focused on family-owned businesses, El Abiad et al. (2024) focused on firms listed on the EURONEXT exchange, Hazzaa et al., (2024) focused on firms in Iraq, Tho (2024) focused on market performance using TOBINQ as a measure. In terms of variable gap, this study captures a revenue based (Net profit margin) and profit based (Returns on asset) measure of performance.

Furthermore, as a gap, this study focuses on firms quoted on the Nigerian stock market and reevaluates a comprehensive CEO portfolio by exploring the relationship amid performance and CEO attributes. This research is the first complete empirical investigation of the collective impact of diverse CEO qualities on performance in emerging markets like Nigeria. Existing literature either provides generalized insights or concentrates on different regions, neglecting a comprehensive understanding of how CEO attributes uniquely shape corporate performance outcomes in Nigeria. A critical research gap such as these calls for the examination of the impact of CEO's attributes on firm performance within the specific context of Nigerian listed companies.

2. LITERATURE REVIEW

2.1. Conceptual Review

Performance sustainability (revenue growth, profit, liquidity) is an essential business criterion that encompasses economic viability, environmental stewardship, and social influence (Saulick et al., 2023). Companies now acknowledge the significance of economic resilience beyond short-term financial profits, with circular economy models becoming more prominent. The examination of sustainable performance has seen considerable progress and alterations due to the evolving economic environment. The heightened emphasis on governance (ESG) factors in evaluating sustainability performance reflects a deeper understanding of the broader implications of business activities (Elamer and Boulhaga, 2024).

Investors are increasingly prioritizing sustainable firms, seeing the value linked to responsible business practices (Maabreh et al., 2024). This movement promotes a loop of responsibility, motivating corporations to adhere to sustainable ideals. Challenges remain, including the need for standardized criteria to assess sustainability success. Confronting these obstacles is essential for promoting openness and comparability in sustainable initiatives.

Furthermore, the traits of Chief Executive Officers have been extensively evaluated, highlighting the many abilities that enhance successful leadership and organizational success (Cai, 2023). Visionary leadership is an essential quality since CEOs who effectively communicate and pursue a compelling organizational vision are linked to superior performance. A dedication to long-term objectives, especially in the area of sustainability, has become more significant. Effective communication skills are essential for CEOs since c and id dialogue about sustainability efforts is vital for nurturing trust amid stakeholders and also aligning the workforce with the organization's overarching objectives.

Chief executive officers have significant influence in the decision-making processes of organisations, which may enhance corporate sustainability (Hashmi et al., 2023). They establish definitive objectives, formulate strategies, oversee operations, and make choices that influence the company's viability. Research outcomes indicate that the traits of chief executive officers affect the performance sustainability of firms (Venugopal et al., 2023). A comprehensive understanding of sustainability challenges is crucial for embedding responsible behaviour into the foundation of organizational plans. Continuous learning is prioritized, with effective CEOs dedicating resources to be knowledgeable about emerging trends, particularly regarding sustainability. Inclusivity and collaboration are essential elements of good leadership, bolstering organizational resilience via the use of varied viewpoints and the promotion of innovation.

Furthermore, the age of the CEO is a critical determinant of a firm's performance sustainability (Mahran and Elamer, 2024). The CEO's chronological age may influence their decision-making and overall efficacy. Younger CEOs may have a greater propensity for risk-taking methods and possess an enhanced ability to generate innovative concepts (Han and Jo, 2024). Also, gender diversity is a significant determinant of leadership levels within a corporation. Gender quotas have been used in several nations to promote gender equality and prevent male dominance on corporate boards (Latura and Weeks, 2023).

In addition, the nationality of a Chief Executive Officer is a significant component that affects their capacity to engage with diverse investors (Loi et al., 2023). In the contemporary global economic landscape, the influx of foreign investment is accelerating, resulting in heightened cross-cultural communication challenges and interpersonal tensions. The inclusion of foreign nationals in a team may provide a competitive advantage to enterprises, enhance dedication to shareholders' interests, and mitigate managerial entrenchment (Fitzsimmons et al., 2023).

2.2. Theoretical Review

This paper adopts the theoretical perspective of agency theory, which elucidates the conflicts between shareholders and CEOs inside corporations (Shatila et al., 2024). Proponents of agency theory include economists such as Jensen, Fama, and Oliver, who have established the theory's basis and continue to provide insights into organizational connections and governance frameworks. Agency conflict may emerge from discrepancies between the objectives of shareholders and those of CEOs. Agency theory posits that powerful CEOs use their capabilities to pursue objectives that conflict with shareholders' interests (Duong et al., 2023). This theory posits that a corporation may optimize its asset management to reduce costs and enhance profitability, hence assuring maximum returns for stakeholders.

The theory also highlights the potential for moral hazard and opportunistic conduct by CEOs. To mitigate agency conflicts and promote responsible leadership, scholars and industry experts often use agency theory to develop governance frameworks, performance incentives, and monitoring mechanisms that match the interests of CEOs with organizational success (Gwala and Mashau, 2023).

Agency theory and also stakeholder theory significantly contribute to the comprehension of organizational dynamics. Agency theory emphasizes self-interest, while stakeholder theory prioritizes the equilibrium of diverse stakeholder interests. Stakeholder theory delineates numerous stakeholders, establishes their interconnections, and underscores the need to include all stakeholders in corporate decision-making procedure. In line with Agency Theory, Chief Executive Officer attributes such as risk preferences, tenure, and experience impact resource allocation, strategic planning, and risk management choices.

By adopting Agency Theory, this research not only provides a theoretical foundation for understanding the interplay between Chief Executive Officers' attributes and performance sustainability but also offers practical insights for policymakers, shareholders, and corporate leaders in Nigeria. The investigation seeks to contribute to the evolving discourse on corporate governance in emerging markets, emphasizing the importance of aligning Chief Executive Officers' attributes with the interests of shareholders to enhance the enduring performance sustainability of listed firms in Nigeria.

2.3. Empirical Review of Literature

Studies examining the correlation among CEO characteristics, corporate governance, and company success include many sectors and geographical regions, providing significant insights into financial performance, sustainability, and corporate social responsibility (CSR). Numerous studies have investigated the nexus amid CEO attributes and company outcomes. Yusuf and Yahaya (2023) discovered that CEO nationality and tenure substantially affect financial performance in Nigeria, with financial leverage and business size as essential control factors. Saleh et al. (2020) similarly emphasized the beneficial impacts of CEO tenure, experience, and political ties on the corporate performance of non-financial enterprises in Palestine. Tran and Pham (2020) established that female CEOs and elevated education levels enhance corporate environmental performance in SMEs in Vietnam. Mukherjee and Sen (2022) identified a favourable correlation between female CEOs, CEO compensation, and financial success in Indian non-financial enterprises, however, CEO activity adversely affected performance.

Diversity in boards and corporate governance have been extensively examined as factors influencing company performance. Yilmaz et al. (2023) examined companies in 24 developing economies, demonstrating that gender and cultural diversity on boards improves corporate governance and social performance. Bin Khidmat et al. (2020) showed that diversity in gender, education, and nationality enhances company performance in China. Molla et al. (2021) discovered that corporate sustainability policies influenced the relationship between board diversity and financial performance in Malaysian firms. Chijoke-Mgbame et al. (2020) underscored the significance of board gender diversity and the inclusion of non-executive directors in enhancing business performance in Nigeria.

Corporate governance procedures greatly influence financial performance. Scholars like Nasrallah and El Khoury (2022) identified a robust association between corporate governance and financial performance in Lebanon, using return on assets (ROA) and return on investment (ROI) as metrics. Bashir et al. (2020) in Pakistan and Dănescu et al. (2021) in Romania established a correlation between board structure, board size, and business performance. Ahinful et al. (2023) identified ownership, age, and size of companies as critical drivers of financial success in Ghanaian SMEs.

Furthermore, the perspective of CSR and sustainability initiatives on financial outcomes has been a central topic of investigation. Okafor et al. (2021) have shown that corporate social responsibility expenditure promotes long-term growth, net profit margin, and firm value in U.S. technology companies. Rossi et al. (2021) discovered that corporate social responsibility policies positively affect financial performance in Tunisian companies, with board size serving as a moderating factor. In the Levant, Al Amosh et al. (2023) specified that ESG performance jointly influence financial success, while governance particularly impacts ROA. Khan et al. (2022) emphasized the significance of management capability in influencing social, economic, and environmental sustainability inside Chinese enterprises, while Uyar et al. (2020) discovered that independent directors and board diligence selectively improve CSR performance in Spain.

Corporate governance and entrepreneurial orientation have been explored within the Nigerian environment. Adedeji et al. (2020) have shown that corporate governance st andards favourably influence both financial and non-financial performance, with sustainability initiatives acting as a mediating factor. Ibrahim and Martins (2020) demonstrated a positive correlation between entrepreneurial attitude and company success. These studies together emphasize the significant impact of leadership qualities, governance frameworks, and corporate social responsibility on company success in various economic and institutional contexts.

3. MATERIALS AND METHODS

The study hinged on an ex post facto methodology, analyzing accessible secondary data without direct modification, to provide insights into how CEO attributes affect the performance sustainability of listed firms. The population for this study consisted of all firms quoted on the Nigeria Stock market. The sample for this study comprised 10 firms quoted on the Nigeria Stock Exchange drawn through a multi-stage sampling procedure. The study data was gathered using the secondary. The research objectives were achieved using descriptive (mean, standard deviation) and inferential statistics (panel ordinary least square regression). In addition, diagnostics tests such as correlation analysis (multicollinearity) and the Hausman test (for model effect determination) were carried out to preserve the integrity of the analysis carried out.

3.1. Model Specification

For this study, the model of Augustine and Chinedu (2022) is adapted as follows:

$$ROA_{it} = \beta_0 + \beta_1 CAGE_{it} + \beta_2 CGEND_{it} + \beta_3 CNAT_{it} + \beta_4 BS_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \mu \quad (1)$$

$$NPM_{it} = \beta_0 + \beta_1 CAGE_{it} + \beta_2 CGEND_{it} + \beta_3 CNAT_{it} + \beta_4 BS_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \mu \quad (2)$$

Where;
ROA_{it} = Return on asset
NPM_{it} = Net profit margin
$CAGE_{it}$ = CEO Age
$CGEND_{it}$ = CEO Gender
$CNAT_{it}$ = CEO Nationality
$SIZE_{it}$ = Firm size
LEV_{it} = Leverage
BS_{it} = Board size
B_0 = Intercept
B_1- β_6 = Coefficient
μ = Error term.

3.2. Definition and Measurement of Variables

Table 1 below captures the measurement of the variables used for this study.

4. DATA ANALYSIS AND DISCUSSION

4.1. Descriptive Analysis

Table 2 below highlights the characteristics of the dataset through a descriptive analysis.

The descriptive statistical analysis of the dataset indicates that the mean and median of the variables denote the average and central values of each dataset, respectively. The findings demonstrate that the standard deviation of all variables is considerably elevated, implying significant dispersion from the mean and reflecting volatility and instability in Nigeria from 2014 to 2023. This elevated standard deviation indicates a significant unpredictability of results. The mean Net Profit Margin (NPM) is around 8.39, the median is 5.93, and the highest number is 96.93. The standard deviation is 34.69, and the skewness is −1.63, indicating a negatively skewed distribution. The kurtosis is 9.67, indicating a leptokurtic distribution characterized by heavy tails and a pronounced peak. The Jarque-Bera statistic of 230.20, accompanied by a P = 0.000000, indicates a substantial deviation of the data from normality.

The mean of CEO Age (CEOAGE) is 0.84, the median is 1.00, and the highest value is 1.00. The standard deviation is 0.36, indicating a negatively skewed distribution. The kurtosis is 4.44, indicating a leptokurtic distribution. The Jarque-Bera statistic of 177.58, accompanied by a P = 0.00, indicates a substantial divergence from normalcy. The mean of CEO Gender (CEOGEN) is 0.89, the median is 1.00, and the highest value is 1.00. The standard deviation is 0.31, indicating a significant negative skew in the distribution. The kurtosis is 7.21, indicating a leptokurtic distribution. The mean of Firm Size (FSIZE) is 8.01, the median is 7.79, and the highest value is 10.31. The standard deviation is 0.95, indicating a favourably skewed distribution. The kurtosis values suggest that the data is mostly leptokurtic since the values exceed three.

4.2. Diagnostics Tests

4.2.1. Correlation statistics

Table 3 illustrates weak and negative connections among NPM, CEOAGE, CEOGEN, CEONAT, FSIZE, LEV, BSIZE, ROA, and CEOAGE. The correlations are moderate and negative, with a moderate positive correlation and a negative correlation. The relationship between CEOAGE and BSIZE is somewhat unfavourable, exhibiting both positive and negative correlations. The relationship between CEOAGE and CEOGEN is weak and negative, exhibiting both positive and negative correlations. The relationship between CEOGEN and CEONAT is weakly negative, exhibiting both positive and negative correlations. The relationship between FSIZE and LEV is weak and negative. In addition, the analysis shows an absence of multicollinearity since all correlations are less than 80% as recommended by Okere et al. (2024).

Table 4 below reveals the model effect outcomes for the regression analysis.

The results of the previous analysis show that the fixed effect model is accepted and the null hypothesis is rejected since the P-value (0.0127) is less than the 5% significance threshold.

Table 1: Measurement of variables

Variables	Definition
CEO Age (CAGE)	Age of CEO at a given period (Kokeno and Muturi, 2016)
CEO Gender (CGEND)	Denoting the gender identity of the individual serving as Chief Executive officer within a company. Gender is measured using a dummy variable, which is given a value of 1 if the company CEO is a woman, and given a value of 0 otherwise (Homroy, 2023)
CEO Nationality	Denoted as dummy variable, which equals 1 if a firm has a foreign CEO in a given period of consideration and 0 if otherwise. (Yusuf and Yahaya, 2023)
Board Size	Board size denotes the total number of directors presiding over the board (Molla et al., 2021)
Leverage	Denoted as Debt-to-Equity Ratio (Utama et al., 2023)
Return on Assets (ROA)	Denoted as profit after tax to total asset (Emeka-Nwokeji, 2019)
Net Profit Margin (NPM)	Represents the ratio of net profit to total revenue (Gulo and Sembiring, 2024)

Source: Authors Compilation (2025)

4.3. Inferential Statistics

The regression in Table 5 above captures the impact of CEO attributes on the net profit margin (NPM) of listed firms in Nigeria. From the table, it can be seen that the Adjusted R-squared is 73%. This indicates that 73% of the changes in the dependent variable (NPM) can be explained by changes in the independent variables. The remaining variation is due to factors not captured in this study. Additionally, the F-statistic demonstrates the overall fit of the research model. The F-statistic is 19.58612 and is highly significant (P = 0.0000) at the 5% level. This suggests that the independent variables (CEOAGE, CEOGEN, CEONAT, FSIZE, LEV and BSIZE) collectively have a significant impact on the net profit margin of listed firms in Nigeria. The Durbin-Watson statistic is 1.580406, which indicates the presence of some serial autocorrelation, a common occurrence in panel data analysis.

Examining the individual coefficients, it can be seen that CEO Age (CEOAGE) has a positive (5.718918) and significant (P = 0.0348) relationship with the net profit margin. This implies that for every unit increase in CEO age, there is an approximate 5.72% increase in the net profit margin of listed firms in Nigeria, significant at the 5% level. Conversely, CEO nationality (CEONAT) shows a negative (-6.583290) and marginally significant (P = 0.0522) relationship with NPM, indicating that a unit change in CEO nationality corresponds to an approximate 6.58% decrease in NPM, significant at the 10% level.

Firm size (FSIZE) also has a positive (5.151911) and marginally significant (P = 0.0537) impact on NPM. This suggests that for every unit increase in firm size, there is an approximate 5.15% increase in the net profit margin, significant at the 10% level. Leverage (LEV) has a negative (−0.107015) and marginally significant (P = 0.0783) impact on NPM, suggesting that a unit increase in leverage results in a 0.11% decrease in net profit margin, significant at the 10% level.

Table 2: Descriptive statistics

Variables	NPM	CEOAGE	CEOGEN	CEONAT	FSIZE	LEV	BSIZE	ROA
Mean	8.39	0.84	0.89	0.71	8.01	70.94	9.36	3.23
Median	5.93	1.00	1.00	1.00	7.79	58.94	8.50	2.71
Maximum	96.93	1.00	1.00	1.00	10.31	196.96	18.00	29.15
Minimum	−159.40	0.00	0.00	0.00	5.58	20.61	4.00	−22.78
Standard deviation	34.69	0.36	0.31	0.45	0.95	40.28	3.30	7.93
Skewness	−1.63	−1.85	−2.49	−0.92	0.57	1.31	0.76	0.34
Kurtosis	9.67	4.44	7.21	1.85	3.11	4.30	3.19	5.22
Jarque-Bera	230.20	65.98	177.58	19.72	5.53	35.96	9.87	22.69
Probability	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Observations	100	100	100	100	100	100	100	100

Source: Author's Computation (2025)

Table 3: Correlation matrix

Variable	NPM	CEOAGE	CEOGEN	CEONAT	FSIZE	LEV	B SIZE	ROA
NPM	1	−0.1142	−0.1888	−0.1340	0.0428	−0.4654	0.2048	N/A
CEOAGE	−0.1142	1	−0.1534	0.2019	−0.4138	0.3932	−0.2672	−0.0246
CEOGEN	−0.1888	−0.1534	1	−0.2246	0.2264	−0.1006	0.1841	0.0557
CEONAT	−0.1340	0.2019	−0.2246	1	−0.1671	0.2279	−0.7939	−0.4090
FSIZE	0.0428	−0.4138	0.2264	−0.1671	1	−0.1380	0.2448	−0.0798
LEV	−0.4654	0.3932	−0.1006	0.2279	−0.1380	1	−0.4516	−0.4453
B SIZE	0.2048	−0.2672	0.1841	−0.7939	0.2448	−0.4516	1	0.3246
ROA	N/A	−0.0246	0.0557	−0.4090	−0.0798	−0.4453	0.3246	1

Source: Author's Computation (2025)

Other variables such as CEO gender (CEOGEN) and board size (BSIZE) show no significant impact on the net profit margin, with P-values of 0.3007 and 0.9031, respectively.

In summary, the analysis indicates that CEO age and firm size positively influence net profit margin, while CEO nationality and leverage have a negative impact. The model as a whole is robust and significant, explaining a substantial portion of the variation in net profit margin among listed firms in Nigeria.

Looking at model two, the regression in the table above captures the impact of CEO attributes on the return on assets (ROA) of listed firms in Nigeria. From the table, it can be seen that the Adjusted R-squared is 44.18%. This indicates that 44.18% of the changes in the dependent variable (ROA) can be explained by changes in the independent variables. The remaining variation is due to factors not captured in this study. In addition, the F-statistic demonstrates the overall fit of the research model. The F-statistic is 6.224236 and is highly significant (P = 0.000000) at the 5% level. This suggests that the independent variables (BSIZE, CEOAGE, CEOGEN, CEONAT, FSIZE, and LEV) collectively have a significant impact on the return on assets of listed firms in Nigeria. The Durbin-Watson statistic is 1.308980, indicating the presence of some serial autocorrelation, which is common in panel data analysis.

From the individual coefficients, it can be seen that CEO age (CEOAGE) has a positive (1.765705) and significant (P = 0.0058) relationship with return on assets. This implies that for every unit increase in CEO age, there is an approximate 1.77% increase in the return on assets of listed firms in Nigeria, significant at the 5% level. Conversely, board size (BSIZE) shows a negative (−0.019694) and non-significant (P = 0.9520) relationship with ROA, indicating that changes in board size do not significantly affect the return on assets. Similarly, CEO gender (CEOGEN) and CEO nationality (CEONAT) also show non-significant impacts on ROA, with P-values of 0.6979 and 0.7517, respectively.

Table 4: Hausman test

Test summary	Chi-square statistic	Chi-square d.f.	Prob.
Cross-section random	16.204454	6	0.0127

Source: Author's Computation using E-Views (2025)

Firm size (FSIZE) has a positive (1.532867) but non-significant (P = 0.2839) impact on ROA, suggesting that changes in firm size do not significantly influence the return on assets. Leverage (LEV) has a negative (−0.043142) and non-significant (P = 0.1344) impact on ROA, indicating that changes in leverage do not significantly affect the return on assets of listed firms in Nigeria. In summary, the analysis indicates that CEO age positively influences the return on assets, while other variables such as board size, CEO gender, CEO nationality, firm size, and leverage do not have significant impacts. The model as a whole is significant, explaining a substantial portion of the variation in return on assets among listed firms in Nigeria.

4.4. Discussion of Findings

This study was conducted to empirically assess the impact of CEO attributes and performance sustainability on listed firms in Nigeria. To achieve this objective, research questions and hypotheses were advanced and secondary data were obtained from 10 different firms with respect to the variables of interest from a 10-year period. The dependent variable is net profit margin (NPM), return on asset (ROA) and leverage (LEV) while the independent variables are CEO gender (CGEND), CEO age (CAGE), CEO nationality (CNAT), CEO board size (CBZ) and CEO firm size (FSIZE). Additionally, regression models were developed to guide the testing of the hypotheses.

Findings from the regression analysis revealed that CEO age (CEOAGE) has a positive and statistically significant relationship with net profit margin (NPM) (P = 0.0348), and firm size (FSIZE) shows a positive and marginally significant effect on NPM (P = 0.0537). Conversely, CEO nationality (CEONAT) exhibits a negative and marginally significant relationship with NPM (P = 0.0522), and leverage (LEV) shows a negative and marginally significant effect (P = 0.0783). The model explains 77.77% of the variability in NPM (R-squared = 0.777655), with the overall model being highly significant (P = 0.000000).

Similarly, the regression analysis for return on assets (ROA) indicates that CEO age (CEOAGE) has a positive and statistically significant effect (P = 0.0058). However, other variables such as board size (BSIZE), CEO gender (CEOGEN), CEO nationality (CEONAT), firm size (FSIZE), and leverage (LEV) were found

Table 5: Regression analysis for model (NPM) and model (ROA)

Variable	Model (NPM)				Model (ROA)				
	Coefficient	Standard Error	t-Stats	Prob.	Variable	Coefficient	Standard Error	t-Stats	Prob.
B SIZE	−0.02	0.32	−0.06	0.95	CEOAGE	5.71	2.66	2.14	0.03
CEOAGE	1.77	0.62	2.83	0.01	CEOGEN	−5.22	5.01	−1.04	0.30
CEOGEN	−0.55	1.41	−0.38	0.69	CEONAT	−6.58	3.34	−1.96	0.05
CEONAT	−0.51	1.62	−0.31	0.75	FSIZE	5.15	2.63	1.95	0.05
FSIZE	1.53	1.42	1.07	0.28	LEV	−0.10	0.06	−1.78	0.07
LEV	−0.04	0.02	−1.51	0.13	B SIZE	0.09	0.78	0.12	0.90
C	−6.42	9.53	−0.67	0.50	C	−21.67	22.72	−0.95	0.34
R-squared	0.52	Mean dependent var	6.02		R-squared	0.77	Mean dependent var		27.28
Adjusted R-squared	0.44	S.D. dependent var	8.21		Adjusted R-squared	0.73	S.D. dependent var		42.34
S.E. of regression	5.52	Sum squared resid	2563.82		S.E. of regression	21.43	Sum squared resid		38603.28
F-statistic	6.22	Durbin-Watson stat	1.30		F-statistic	19.58	Durbin-Watson stat		1.58
Prob (F-statistic)	0.00				Prob (F-statistic)	0.00			

Source: Author's Computation using E-Views (2025) to be statistically insignificant. The model explains 52.64% of the variability in ROA (R-squared = 0.526396), and the overall model is highly significant (P = 0.000000). These findings underscore the varying impacts of CEO characteristics and firm attributes on financial performance, echoing the need for further empirical research on green accounting practices and their influence on firm value in Nigeria. Finally, Yusuf and Yahaya (2023), whose findings are consistent with the results of this research, discovered that financial performance is significantly affected by CEO nationality and tenure.

This study's results demonstrate some notable correlations between CEO characteristics (age, nationality, and gender) and financial performance indicators (NPM, ROA). The positive and statistically significant link between CEO age and NPM/ROA correlates with past research, such as Yusuf and Yahaya (2023), who showed that CEO qualities, including nationality and tenure, play a major influence in the financial performance of enterprises in Nigeria. The influence of CEO age on financial performance implies that experienced CEOs offer value to organisations by successfully managing resources and generating profitability. Conversely, the negative impact of CEO nationality on NPM coincides with the results of Chijoke-Mgbame et al. (2020), where CEO diversity (in terms of gender, country, and experience) was found to have variable effects on financial performance, frequently dependent on the local company climate.

The results correspond with the conclusions of research by Saleh et al. (2020) and Tran and Pham (2020), which illustrated the advantageous effects of CEO characteristics, including tenure, experience, and political connections, on business performance. These findings imply that organisations with experienced and strategically positioned CEOs are likely to perform better financially, contributing favourably to the economic development of enterprises in the Nigerian setting. Moreover, the affirmative correlation between firm size (FSIZE) and net profit margin (NPM) substantiates the economic hypothesis that bigger enterprises possess greater resources to attain economies of scale, resulting in enhanced profitability.

From a management standpoint, the study's results underline the necessity of choosing CEOs based on age and experience, especially in the Nigerian market, where the age component tends to correspond with better financial success. This underscores the need for firms to prioritise experienced leadership when selecting their CEOs, particularly in sectors where strategic acumen is essential for overcoming problems and enhancing performance. The significant negative relationship between CEO nationality and firm profitability suggests that local firms may benefit from fostering leadership that understands the nuances of the local market and cultural dynamics, which is often critical for improving firm performance in emerging markets like Nigeria.

Furthermore, the findings suggest that whereas board size (CBZ) and CEO gender (CGEND) influence firm performance, their effects may be indirect or contingent upon other contextual variables for full realisation. For instance, research like those of Yilmaz et al. (2023) and Bin Khidmat et al. (2020) imply that diversity in board membership may contribute to enhanced governance and decision-making, while the direct influence on financial results would be less visible without stronger governance frameworks in place. Corporate Ramifications: The results on CEO firm size (FSIZE) are especially relevant for organisations assessing their strategic direction and organizational structure.

Bigger business size is advantageous for financial performance, suggesting that companies pursuing sustainability and profitability should prioritise development and expansion since larger organisations often possess more stability and resources to endure economic downturns and seize opportunities. The marginally significant negative effect of leverage (LEV) on financial performance aligns with the conclusions of Al Amosh et al. (2023) and Okafor et al. (2021), suggesting that although leveraging may offer immediate capital expansion, excessive debt can impede long-term profitability and sustainability. Firms should so carefully manage their capital structure to ensure that debt levels are appropriate for preserving financial health.

Moreover, the use of agency theory is especially pertinent in this research as it underscores the interaction between the principal (shareholders) and the agent (CEO). Agency theory posits that the interests of the CEO (the agent) and the shareholders (the principal) may not always coincide, thus impacting corporate performance. The results presented, especially on the importance of CEO characteristics such as age, country, and business size, give insights into how these qualities affect the agency relationship. For example, the favourable impact of CEO age on NPM and ROA supports the view that experienced CEOs are better at handling the principal-agent conflict by aligning their interests with those of the shareholders. Experienced CEOs could be better at risk management, governance, and decision-making, hence boosting the firm's financial performance.

Also, the inverse correlation between CEO nationality and financial success may be analysed within the framework of agency theory, whereby misalignment with the local market environment or shareholder interests may elevate agency costs and impede organisational effectiveness. This research contributes to the literature linking CEO characteristics to business success, especially within the context of agency theory. It underscores the importance of leadership characteristics in mitigating the agency problem and ensuring that the goals of the CEO align with the broader strategic objectives of the firm.

Furthermore, the study highlights the need for further exploration into how corporate governance mechanisms, including board composition and CEO attributes, can address the principal-agent problem and foster long-term financial sustainability. In conclusion, the study's results and their relation to the literature and agency theory underscore the critical influence of CEO traits, business features, and corporate governance on financial outcomes. Economic and managerial consequences indicate that meticulous attention to CEO selection, business size, and governance structures is crucial for enhancing financial performance and maintaining sustainability in Nigerian enterprises.

5. CONCLUSION AND RECOMMENDATIONS

This study investigated the impact of chief executive officers' attributes and performance sustainability of listed firms in Nigeria. The research reveals that CEO characteristics significantly influence firm performance. Ultimately, the research emphasizes the need for improved governance and strategic leadership tailored to the Nigerian business environment to foster long-term corporate success and sustainability. It highlights the critical role that CEO attributes play in driving organizational performance and calls for enhanced management policies that support effective decision-making and corporate governance strategies. By providing practical insights into how CEO characteristics can catalyze sustainable development, the study contributes to a deeper underst anding of the dynamics influencing firm performance in emerging markets like Nigeria. In view of the foregoing, it is concluded that the impact chief executive officers attribute promotes better performance and sustainability in Nigerian firms given an environment that encourages mutual understanding and democratic decision-making by the board.

In light of the findings of this research, the ensuing recommendations were determined:

i. Nigerian firms should shift focus to selecting Chief Executive Officers who bring a balance of experience and innovation. Investing in leadership development programs can help younger Chief Executive Officers gain the necessary experience, while more seasoned executives should be encouraged to stay updated with modern management practices to foster a culture of performance excellence and sustainability.
ii. Nigerian firms should boost the diverse chief executive officers' nationality for global competitiveness in order to bring positive development to Nigerian businesses
iii. Firms should actively promote CEO gender diversity to pull an extensive range of ideas and approaches, which can contribute to improved long-term performance and sustainability.

Overall, this research adds to the st anding knowledge by presenting localized insights, empirical evidence, and real-world implications for legislators and leaders. It contributes to the broader debate of the crux amid CEO traits and behavioural-based outcomes, offering specific insights into how attributes such as Chief Executive Officers' age, gender, nationality, and tenure affect the sustainability and performance of Nigerian businesses. This research accentuates the significance of considering Chief Executive Officers' attributes in strategic corporate decision-making and policy formulation to enhance the long-term performance and resilience of firms in Nigeria.

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