JETMASE
Journal of Emerging Trends in Management Sciences and Entrepreneurship
Volume 7(2), Pages 45 - 69 December, 2025
ISSN: 2384-762X
https://www.jetmase.com

Effect of Firm Characteristics and Financial Performance of Oil and Gas Companies in Nigeria

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ABSTRACT: This study examines the impact of firm characteristics on the financial performance of oil and gas companies listed on the Nigerian Stock Exchange. Specifically, the study investigates the influence of financial leverage (FLV), firm size (FSZ), firm age (FAG), and return on equity (ROE) on financial performance, measured by return on assets (ROA). Utilizing panel data extracted from the annual financial reports of selected oil and gas firms over a period of 11years (2010-2023), the analysis employed Pooled Ordinary Least Squares (OLS), Random Effects Model (REM), and Fixed Effects Model (FEM). Diagnostic tests, including the Breusch-Pagan Lagrange Multiplier and Hausman tests, confirmed the appropriateness of the robust Fixed Effects Model for the analysis. The findings reveal that financial leverage and return on equity have a positive and statistically significant effect on return on assets, suggesting that effective use of debt and strong equity returns enhance profitability. Conversely, firm size shows a negative and significant relationship with financial performance, indicating potential inefficiencies associated with firm growth. Firm age, however, has an insignificant effect on ROA, implying that maturity alone does not drive financial outcomes in the sector. The study concludes that firm-specific factors play a critical role in shaping financial performance. It recommends that oil and gas firms in Nigeria adopt strategic capital structure decisions, improve operational efficiency, and enhance shareholder value to achieve sustainable growth. The findings offer important insights for corporate managers, investors, and policymakers seeking to improve firm performance in the capital-intensive oil and gas industry.

Keywords: Firm Characteristics, Financial Performance, Oil and Gas Companies

INTRODUCTION

The oil and gas sector remains one of the most strategic and economically significant industries in Nigeria, contributing substantially to national revenue, foreign exchange earnings, and Gross Domestic Product (GDP). As an extractive and capital-intensive sector, it plays a pivotal role in driving the nation's economic development. In recent years, however, the sector has faced numerous challenges including declining global oil prices, regulatory uncertainty, infrastructure deficits, and rising operational costs that have adversely affected the financial performance of many firms (Abada & Okuma, 2017).

Notably, the sector's contribution to national GDP has declined, reflecting its vulnerability to both domestic and global shocks. In the second quarter of 2023, the oil and gas sector contributed just 5.34% to Nigeria's GDP, rising slightly to 5.70% in the second quarter

of 2024. This modest contribution underscores the structural weaknesses and underperformance currently plaguing the industry.

Beyond external pressures, internal firm-specific characteristics such as financial leverage, firm size, firm age, and return on equity have become increasingly influential in shaping financial outcomes (Abdu, 2016). Strategic decisions regarding capital structure, asset investment, and growth trajectories often determine whether firms thrive or struggle within this volatile environment (Abeysinghe & Basnayake, 2016).

In Nigeria, many oil and gas companies have faced severe financial distress, manifested by falling returns, liquidity shortages, and, in extreme cases, stock exchange delisting. For example, Ardova Petroleum Plc, an upstream oil company, delisted from the Nigerian Exchange (NGX) in July 2023, wiping approximately ₦21.5 billion in market value from the exchange. Similarly, Global Spectrum Energy Services, an offshore support vessel company, exited the NGX around the same time, removing nearly ₦9.5 billion from the market capitalization. In early 2025, MRS Oil Nigeria Plc, another oil-sector firm, voluntarily delisted from NGX and moved to the NASD OTC Securities Exchange, indicating significant dissatisfaction with capital market operations.

These corporate exits contribute to a broader trend as of 2022, 121 firms were delisted over a 20-year span from 2002 to 2022, many citing harsh economic conditions, FX volatility, and rising operating costs as reasons for exit. Between 2021 and 2023 alone, 11 listed companies collectively erased ₦500 billion in market capitalization, including key energy sector players impacted by currency devaluation, inflation, and regulatory burdens.

While these aggregate figures highlight systemic pressures, firm-level data also underscore the internal fragility. For instance, Oando Plc reported a steep drop in revenue from ₦577 billion in 2019 to ₦477 billion in 2020 and a narrowing loss after tax from ₦207 billion in 2019 to ₦141 billion in 2020. These declines were attributed to global pandemic disruptions and asset impairment charges, further challenging the company's resilience and liquidity.

These patterns validate that macroeconomic instability such as inflation, foreign exchange volatility, and high interest rates has played a significant role in undermining firm viability. However, the root causes of corporate distress in this sector also stem from internal firm-specific weaknesses: weak governance, limited strategic flexibility, poor capital structure, and inadequate operational efficiency. As observed by Bruns (2017), these internal limitations frequently compound external shocks, constraining a company's capacity to adapt, compete, or remain solvent.

One of the most pressing concerns in the Nigerian oil and gas sector is the optimal use of financial leverage. While debt can be a tool for growth, excessive or mismanaged leverage may increase financial risk, especially in a sector where revenues are highly dependent on fluctuating oil prices (Dakito, 2017). Similarly, the impact of firm size on performance remains a topic of debate while larger firms may benefit from economies of scale, they may also suffer from organizational inefficiencies. Likewise, the age of a firm may influence its performance depending on its ability to innovate, adapt, and remain efficient over time. Return on equity, as a measure of how effectively a company uses shareholder funds to generate profit, is also a crucial performance indicator

in capital-intensive industries like oil and gas (Elif & Halil, 2017; Okoro & Offor, 2019).

Despite the growing relevance of these firm-specific characteristics, there exists a noticeable gap in sector-specific empirical research focusing on how these factors affect financial performance within Nigeria's oil and gas industry. Most existing studies have either concentrated on broad industry analyses or failed to contextualize their findings within the peculiarities of the oil and gas sector. This oversight is critical, given the unique financial and operational dynamics of the sector, including its exposure to global market forces, high fixed capital requirements, and regulatory complexities (Famiyeh, 2017; Ugwu, Eboatu, Okoro & Okeke, 2022).

In light of these challenges, there is a need for a more nuanced understanding of how internal firm characteristics influence financial performance in the oil and gas industry in Nigeria. Such understanding is vital for managers, investors, and policymakers seeking to enhance operational efficiency, profitability, and long-term sustainability. By examining the relationship between firm characteristics specifically financial leverage, firm size, firm age, and return on equity and return on assets, this study aims to provide practical insights that can inform strategic decisions in a sector that remains at the heart of Nigeria's economic aspirations

Statement of the problem

Nigeria's oil and gas industry plays a critical role in the nation's economy, contributing significantly to national revenue, foreign exchange earnings, and Gross Domestic Product (GDP).

However, the sector continues to grapple with a myriad of challenges that undermine firm-level financial performance. Persistent macroeconomic instability marked by inflation volatility, currency devaluation, and rising interest rates has created a volatile operating environment. Yet, beyond these external shocks, internal firm-specific characteristics play a vital role in determining how well companies navigate financial pressures, as noted by Gololo (2019). Over the last few years, the industry has experienced a wave of financial distress.

Several prominent oil and gas firms, including Ardova Plc, MRS Oil Nigeria Plc, and Global Spectrum Energy Services, have either voluntarily delisted from the Nigerian Stock Exchange or exited due to poor financial performance. For example, Ardova Plc delisted in 2023, erasing over ₦21.5 billion in market capitalization, while MRS Oil transitioned to the NASD OTC Exchange amid market challenges. These exits reflect declining investor confidence and weakened corporate resilience in the face of macroeconomic and operational headwinds.

This crisis has had profound implications for firm-specific attributes. Firm size has declined significantly across many companies due to shrinking revenues and reduced asset bases. For instance, Oando Plc experienced a revenue drop from ₦577 billion in 2019 to ₦477 billion in 2020, with asset impairments eroding its capital strength and consequently reducing its financial footprint in the sector. While older firms theoretically possess more experience and adaptive strategies, several long-standing companies have struggled to remain competitive due to outdated technologies, legacy debts, and governance weaknesses.

In contrast, younger firms with leaner structures have occasionally demonstrated better agility, although many still lack the scale and financial depth to withstand prolonged industry shocks. Rising debt burdens have also become increasingly unsustainable as high interest rates and

exchange rate volatility make financial leverage riskier. Many firms have resorted to heavy borrowing to finance operations, but declining profitability has made debt servicing more difficult, increasing financial fragility and reducing investor trust.

Despite the strategic importance of oil and gas firms, many continue to underperform financially, with symptoms ranging from liquidity constraints to sustained losses. A growing concern is the extent to which internal firm-level characteristics such as financial leverage, firm size, firm age, and return on equity influence financial performance metrics like return on assets. Understanding these relationships is essential for identifying the internal mechanisms that enable firms to remain profitable in the face of a challenging external environment.

Although several empirical studies have examined the link between firm characteristics and performance, few have explored this relationship specifically within Nigeria's oil and gas sector, which is capital-intensive and subject to complex operational and regulatory challenges. Existing literature often generalizes findings across industries, failing to consider the unique structural and strategic dynamics within oil and gas firms. Given this research gap, the current study investigates how firm-specific characteristics influence the financial performance of oil and gas companies listed on the Nigerian Stock Exchange. By focusing on variables such as financial leverage, firm size, firm age, and return on equity, this research aims to generate sector-specific insights that can inform corporate financial strategies and policymaking to strengthen the long-term viability and performance of Nigeria's most economically significant industry

Objective of the Study

The main objective of this study is to examine the effect of firm characteristics on the financial performance of oil and gas companies in Nigeria. Specifically, the study seeks to: Investigate the extent to which financial leverage affects the financial performance of oil and gas companies; Determine whether firm age has a significant effect on the financial performance of oil and gas companies; Evaluate the effect of firm size on the financial performance of oil and gas companies.

Research Hypotheses

The following null hypotheses are formulated for empirical testing:

H_{01}: Financial leverage has no significant effect on the financial performance of oil and gas companies

H_{02}: Firm age has no significant effect on the financial performance of oil and gas companies

H_{03}: Firm size has no significant effect on the financial performance of oil and gas companies

LITERATURE REVIEW

Firm Characteristics

According to Helmig, Spraul, and Ingenhoff, (2016) firm characteristics are the various types of information presented in financial statements of business organizations that serve as predictors of the firms' accounting information quality and performance. Firm characteristics can also be defined as the behavioural patterns of company's operation which can enable them to achieve their objectives throughout the period of their operations (Kantudu, Mukhtar, & Samaila 2017; Okoro & Ekwunife, 2022). Firm attributes are firm characteristics or specific traits that distinguish one company from t h e other. They are those other features that distinguish one company from the other. These features normally influence company

decisions and information disclosure as well as risk disclosure in the financial report (Kukreja, Sharma, Habib & Bansal, 2022; Ogunewe, Ananwude & Nduka, 2020).

The qualities of a company differ from one another. The characteristics of a company can be established based on the relevant information presented in its financial statements for a specific accounting period (Lin-Hi, & Blumberg, 2018). Firm characteristics are those attributes such as firm size, leverage, liquidity, sales growth, capital, firm age, dividend, market share, off balance sheet activities, operating expenses, among others, that affect the operations of a firm (Marano, & Kostova, 2016). Firm size is an important factor that frequently relates to the total assets, revenues, or market capitalization of the company. Larger enterprises benefit from economies of scale, increased access to resources, and increased bargaining power (Marano, & Kostova, 2016; Okoro & Anichebe, 2019; Obidike, Onyeka & Nduka, 2022).

They may also have a stronger market presence, which allows businesses to weather economic downturns more effectively. Smaller enterprises, on the other hand, may be more agile and flexible, allowing them to respond swiftly to market changes and explore niche markets (Mellahi, Frynas, Sun, & Siegel, 2016;).

Measurement of Firm Characteristics

There are various ways of measuring firm characteristics. However, for the purpose of this study, firm characteristics ware measured in terms of size, profitability, asset tangibility and market capitalization.

Firm size

In all sectors of any economy, a firm is either said to be large or small. The amount of capital owned by a firm can be seen in its size. Firm size is a fundamental concept that refers to the magnitude of a company's operations, assets, revenues, or market capitalization. It is an important characteristic that varies across different industries, sectors, and individual firms. A large company is expected to have a well-structured accounting and internal control system and should be able to provide the expertise needed to structure the firm's capital structure. There are various ways to define and quantify the size of a business. Total assets, annual revenues, market capitalization, and number of employees are common measures used to assess firm size (Mohammed, Saheed & Oladele 2016; Nduka, Okolie & Ngangah, 2025). The type of measurement used is determined by the context and purpose of the investigation. Firm size, for example, can be measured in the manufacturing sector by the value of plant and equipment, whereas in the technology sector by market capitalization. Firm size is among determinant factors of capital structure. The growth and widespread effect of large enterprises-multinational corporations (MNCs) in the context of international integration have demonstrated the importance of scale in firm performance and business environment. According to Ngoc, (2018), size is closely related to risk and bankruptcy costs; that larger firms are usually more diversified and thus bear less risk compared to smaller ones. Even in the aspect of access to capital, banks are more willing to lend their funds to larger firms partly because they are more diversified and partly because larger firms usually request larger amounts of debt capital than smaller firms. As a consequence, larger firms are usually able to reduce transaction costs associated with long-term debt issuance and can arrange a lower interest rate. Although, it is important to note that large firms can easily have agency problems than smaller ones which may lead to misalignment of interest and corporate failure.

Firm Age

Firm age refers to the number of years a company has been in operation since its incorporation or establishment. It is a commonly used proxy for organizational maturity, experience, and stability in corporate finance and performance studies. Older firms are often presumed to have more experience in their industry, established operational processes, and stronger relationships with stakeholders such as customers, suppliers, regulators, and financial institutions (Onyinyechi, & Ihendinihu, 2016; Okeke, Bebedeth & Okoro, 2025; Nduka, Ananwude & Osakwe, 2019). As a result, firm age is frequently viewed as an indicator of corporate resilience and long-term viability.

Theoretically, the age of a firm may influence its financial performance and strategic behavior in several ways. First, mature firms are more likely to have accumulated institutional knowledge and learned from past business cycles, giving them an advantage in navigating market volatility (Jovanovic, 1982). Their longevity may signal credibility and reduce perceived risk among investors and lenders, which can lead to more favorable financing terms. Additionally, older firms are likely to have developed reputational capital, brand recognition, and market trust, all of which can contribute positively to financial outcomes.

However, the relationship between firm age and financial performance is not necessarily linear or always positive. As firms grow older, they may become more bureaucratic, less innovative, and slower to adapt to changing market conditions (Onyinyechi & Ihendinihu 2016; Ubahi, Patience & Okoro, 2025; Aniefor, Nduka, Ananwude & Ezeaku, 2021). Organizational inertia and resistance to change may hinder the ability of older firms to pursue efficiency-enhancing innovations or restructure operations. In some cases, the continued reliance on outdated technologies or legacy systems can erode competitive advantage over time.

Moreover, firm age can influence financial strategy and risk appetite. Younger firms may exhibit higher growth potential but also greater financial volatility due to limited market experience and weaker internal controls. In contrast, older firms may adopt more conservative financial policies and avoid high-risk investments, potentially limiting returns. These differences can significantly shape the financial outcomes and operational profiles of companies across sectors, including the oil and gas industry, which is capital-intensive and sensitive to market and regulatory shifts.

Empirical evidence on the relationship between firm age and financial performance presents mixed findings. Some studies (e.g., Oscar, 2016) report a negative or insignificant relationship, suggesting that age alone does not guarantee superior performance. Others argue that the benefits of firm age such as institutional knowledge and stakeholder relationships are context-dependent and influenced by industry-specific dynamics (Soyinka, Sunday & Adedeji 2017; Ezenwaka & Okoro, 2020). In sectors like oil and gas, where capital intensity and technological sophistication are critical, older firms may struggle to remain agile and competitive if they fail to modernize operations.

In summary, firm age is a multifaceted characteristic that can affect a company's financial performance through accumulated experience, reputation, strategic conservatism, or operational rigidity. Its impact may vary depending on how firms adapt to change, innovate, and leverage their maturity to create value. Within the Nigerian oil and gas sector, understanding the role of firm age is essential for assessing financial health and long-term

viability in an increasingly complex and dynamic business environment.

Financial Leverage

Financial Leverage refers to the debt financing percentage in a company's capital structure. It is a measure of the use of debt versus the use of equity to finance the assets and activities of an organization (Thuy, Khuong, Canh, & Liem, 2021). It is one of the financing decisions that firms have to make. Debt financing is mainly in the form of loan and bond but other form such as securing goods on credit also exist. High usage of debt financing leads to an increase in financial leverage and is associated with greater risk of bankruptcy. However, it is also associated with various advantages such as maintaining company ownership intact, tax deductions, and low transactional costs (Umoren, Ogbari, & Atolagbe, 2017). On the other hand, equity financing entails raising money by selling of company shares to investors who acquire ownership in the company (Yusoff, & Adamu, 2016). Equity financing may also come in the form of reinvesting the company's profits. The capital structure decision is essential to many other corporate finance decisions.

Management decisions like as dividend policy, merger and acquisition finance, capital budgeting, and so on are all linked to capital structure decisions. The factors that impact management's decision to include more or less debt in their capital structure has piqued the interest of both finance experts and practitioners. However, the main problem associated with the decisions of capital mix is the discovery of the optimal capital structure for a company; considering that each companies have their distinguished characteristics. The optimal capital structure represents the ideal mix of debt and equity that maximizes the value of the company and minimizes the cost of capital. Finding the optimal capital structure involves considering factors such as the company's risk profile, industry norms, tax considerations, financial flexibility, etc. The cost of equity is usually the claim on earnings provided to shareholders for their ownership stake. Although equity financing is associated with lower risks of bankruptcy, it is an expensive source of financing as investor demand a higher rate of return. Companies can use leverage to finance their assets; instead of issuing stock to raise capital, companies can use debt financing to invest in business operations in an attempt to increase shareholder value (Amahalu, Okoye, Nweze, Chinyere, & Christian, 2017). The financial leverage of a company depends on the choice made by the management to either use debt or equity to fund the operations of the company. Financial leverage is often gauged using the debt ratio, equity ratio, and debt to equity ratio (Bunea, & Dinu, 2020).

Financial Performance

Financial performance refers to the degree to which a firm efficiently utilizes its resources to generate revenue, profit, and value for shareholders over a given period. It serves as a critical indicator of a firm's operational effectiveness, strategic soundness, and overall economic health. In the context of corporate finance and strategic management, financial performance is often analyzed through both accounting-based measures and market-based indicators, depending on the objectives of the study and data availability (Ishak, Amran, & Manaf, 2018; Nduka, Atueyi, Osakwe & Mbanefo, 2021).

One of the most commonly used accounting measures of financial performance is Return on Assets (ROA), which evaluates how effectively a firm uses its total assets to generate earnings. ROA is especially relevant in asset-intensive industries like oil and gas,

where substantial capital is tied up in exploration, drilling, refining, and distribution infrastructure. A higher ROA indicates better utilization of assets and operational efficiency, which are crucial for sustaining profitability in volatile market conditions (Mbonu, & Amahalu, 2021; Monogbe, Omotayo, Achugbu & Nduka, 2016).

Other traditional metrics of financial performance include Return on Equity (ROE), Net Profit Margin, Earnings Before Interest and Tax (EBIT), and Earnings Per Share (EPS). These indicators collectively provide insights into profitability, cost control, revenue generation, and shareholder value creation. However, for firms listed on stock exchanges, financial performance is also judged through market-based measures such as stock price appreciation, price-to-earnings (P/E) ratio, and market capitalization (Okoro, 2016; Ekwunife, Nduka & Ogini, 2022).

In the oil and gas sector, financial performance is influenced not only by internal management strategies but also by external factors such as global oil prices, government regulations, foreign exchange volatility, and environmental policies. Nevertheless, internal firm characteristics—such as capital structure (leverage), firm size, age, and profitability ratios—remain critical determinants of how firms respond to these challenges and maintain financial stability (Mule, Mukras, & Nzioka, 2015).

Sound financial performance enables firms to reinvest in operations, attract investors, and sustain competitive advantage. It is also closely linked to a company's creditworthiness, investment capacity, and ability to withstand economic shocks. Conversely, poor financial performance can signal inefficiencies, high financial risk, and long-term unsustainability, which may lead to reduced investor confidence and eventual market exit.

Numerous empirical studies have examined the relationship between firm-specific factors and financial performance. For example, Okudo, and Ndubuisi, (2021) identified strong links between firm size, leverage, and profitability in the Nigerian context. However, results often vary by industry, market structure, and the measurement criteria employed. In capital-intensive sectors like oil and gas, leveraging internal strengths such as financial planning, asset utilization, and capital structure optimization is essential for ensuring sustainable financial outcomes.

In summary, financial performance is a multidimensional construct that captures the financial viability, efficiency, and strategic direction of firms. For oil and gas companies in Nigeria, where economic and regulatory uncertainties are persistent, understanding the internal drivers of financial performance is vital for long-term growth, stakeholder trust, and industry resilience

Theoretical framework

Trade-off theory by Modigliani and Miller (1958)

This study anchored on trade-off theory. Trade-off theory is one of the most relevant theories of capital structure. Following the dispute on Modigliani-Miller's theorem, the trade-off theory was carefully considered (Iqbal et al., 2012). The initial version of trade-off theory emerged during the Modigliani-Miller theorem discussion. When the irrelevance theory was combined with the corporate income tax, it resulted in a favorable benefit for debt, i.e., it shields earnings from taxation. Trade-off theory is further divided into two namely; static trade-off theory and dynamic trade-off theory. Static trade-off theory according to Iqbal et al.

(2012) presupposes that the firm's capital structure is optimal. This means that the costs and advantages of debt and equity are estimated in an ideal environment. Firms profit from a tax shelter by doing so, but the disadvantage is that if a corporation has too much debt, it might cause future catastrophic damage to the firm's capital structure. As a result, in a nutshell, it gives tax benefits as well as substantial financial difficulties if too much debt is incurred. Another factor to consider is the cost of the agency. Agency costs may be the result of many conflicts of interest among the firm's various stakeholders as a result of ex post-unbalanced information. Trade-off theory is anchor theory for this research and is relevant to this work because it tends to explain that firms have optimal capital structure and also take into consideration some factors before choosing between equity and debt. Factors like benefits derived especially in terms of taxation and other costs and also taking their characteristics into consideration.

2.2.2. Dynamic capability theory

The study was also based on the dynamic capabilities theory which is an extension of there source-based view (RBV) theory of the firm. The theory discusses the flaws of the resource-based view theory. The RBV theory has been critiqued for failing to account for environmental dynamism and how firms should react when faced with obsolescing resources. The dynamic capabilities theory asserts that the core of dynamic capabilities line of attack is that competitive attainment ascends from the unceasing growth, alignment and reconfiguration of firm's specific characteristics (Farinas & Moreno, 2000). The dynamic capabilities enable firms to create, develop and protect those characteristics that lead to sustainability of the firm. The dynamic capabilities theory argues that resources and capabilities are constantly being developed inside the firm. Subsequently, Barney (1991)that firms resources are all possessions, competences, organizational practices, business features, information knowledge among others controlled by the business that allow the business to comprehend and apply tactics that progress its competence and effectiveness. Relationships generally are deliberated to be the resources of the firm (Palestrini, 2007) and hence firm characteristics, in particular, can similarly be regarded as a weighty resource which can significantly influence the performance of the firm ab ove competitors in the industry. Capabilities that deliver ways of adjusting to the changes in the business environment include consumer demands, advent of novel markets and competitive variations (Greiner, 1972).

The Signaling theory

This theory refers to the idea that the agents send information to the principal in order credible relationship. Managers have more first-hand information about the firm than firm's investors do but they are always reluctant to provide transparent information to the shareholders. So, the financial characteristics of a firm can be used for information purpose and it also act as a signal for the firm's future projection proficiently. Information signaling model developed by (Miller and Rock 1985) suggest that financial data convey information to individual and institutional investors regarding the firm's future prospects. Indeed, when a company listed on the Stock Exchange makes pronouncement about its trading in regards to its financial performance, the expectations of the public especially speculators tend to rise (Abuaja & Ukpong, 2022; Anusi & Nduka, 2022). This theory refers to the idea that the agents send information to the principal in order to create credible relationship. Managers have more first-hand information about the firm than firm's investors do but

they are always reluctant to provide transparent information to the shareholders. So, firms' financial characteristics of a firm can be used for information purpose and it also act as a signal for the firm's future projection proficiently.

Empirical Reviews

Diriyai and korolo (2023) examined the relationship between firm characteristics structure and the quality of financial reporting of publicly traded industrial goods companies. The specific objectives of the study were to determine whether the characteristics of corporate structure - company size, liquidity, company age, and debt - have an impact on the quality of financial reporting of publicly traded industrial goods companies. An ex post facto research design was used and the study used secondary data from the annual accounts and business reports of the listed industrial goods companies for the relevant years considered (2015- 2020). Ordinary least squares (OLS) regression techniques were used to examine the relationship between the variables. The study found that company size and liquidity are significantly positively associated with the quality of financial reporting by publicly traded industrial goods companies in Nigeria, while there is an insignificant positive association between firm age and the quality of financial reporting by publicly traded industrial goods companies in Nigeria and there is an insignificant negative association between Leverage and quality of financial reporting of listed industrial goods companies in Nigeria.

Fagbemi, Kolawole, Adigbole, and Abogun, (2022) scrutinized the relationship between C-suite bias, firm characteristics, and capital structure decisions in quoted industrial goods firms in Nigeria. The research design employed was ex-postfacto, utilizing data from 2002 to 2020. Pooled Ordinary Least Squares (OLS) regression analysis was applied for data analysis. The findings indicated that C-suite tenure positively impacts capital structure decisions, suggesting that a longer tenure of C-suite executives in governing a company's affairs contributes to favorable capital structure choices. As a result, the study recommended that corporations should consider allowing C-suite members to serve for an extended period, as it can enhance the quality of their capital structure decisions.

Benvolio and Ironkwe (2022) examined the impact of board compositions on firm performance but focused on the banking sub-sector. They claimed to have sampled a total of fourteen (14) quoted commercial banks in Nigeria for eleven (11) financial years of 2011 to 2021. They measure performance using market value of shares and used only two board composition (board size and board independence) variables as independent variables. Relying on the outcome of their fixed effect result, it shows that board size has a significant negative impact on firm value while board independence is positive and no significant.

Onyekwere and Babangida (2022) investigated the impact of board diversity on firm performance of twelve (12) banks for five years (2015-2019). The selected three board composition variables of size, independence and gender diversity and also used two control variables of firm size and age. They adopted two proxies for firm performance; ROA and ROE. They employed the panel regression technique and found that board gender diversity has a significant positive impact both the two performance proxies, while board independence has a significant negative impact on both ROA and ROE.

Etukudo, Okon and Bassey, (2022) focused on firm characteristics and financial performance of listed consumer goods firms. To achieve the objectives of the study, ex-post

facto research design was adopted. The source of data collection was secondary data. Data were generated from annual reports and accounts of the selected firms. The data collected were analyzed using multiple regression analysis. The finding revealed that (i) Firm characteristics (leverage, firm size, liquidity and operating expenses) have a significant effect on profit after tax of listed consumer goods firms in Nigeria (ii) Firm characteristics (leverage, firm size, liquidity and operating expenses) have a significant effect on return on asset of listed consumer goods firms in Nigeria (iii) Firm characteristics (leverage, firm size, liquidity and operating expenses) have no significant effect on return on equity of listed consumer goods firms in Nigeria. performance positively.

Jibril and Idris (2022) examined the effect of firms specific attributes and financial performance of quoted conglomerates companies in Nigeria. Secondary data were sourced through the published annual reports of the sampled companies for the period under review 2015-2021. Panel data extracted were analysed using multiple regression technique after conducting series of robustness checks to ascertain validity. Findings from the study reveal that firm size has a positive and significant effect on financial performance. While liquidity has positive and insignificantly effect on financial performance, on the other hand leverage has a negative but insignificantly effect on financial performance.

Kinyua and Ochieng (2022), established the effects of firm characteristics, corporate governance (CG), firm performance, and macroeconomic environment on financial leverage. The methodology used reviewed various empirical literature, articles, publications, and conceptual studies where descriptive and quantitative analysis were applied. According to various publications reviewed, there are positive, negative, and contradictory outcomes between firm characteristics, CG, firm performance and macroeconomic environment on financial leverage. Besides, the findings from a different strand of studies in the literature suggest that board ownership and audit quality negatively influence financial leverage. Other research gaps emerging in the literature review include; firm characteristics regarded as a moderating variable between corporate governance and financial leverage.

Mohammed and Usman (2016) examined the impact of corporate attributes on the profitability of listed pharmaceutical firms in Nigeria using a panel data of five sampled firms for a period of ten years (2004-2013). They extracted data from the annual accounts of the selected firms. Multiple regression technique was employed to examine the influence of corporate attributes on the profitability of listed pharmaceutical firms in Nigeria. The study reveals that firm size, leverage, and growth have positive and significant relationship with profitability implying that they have impact in increasing share price. However, the relationship between liquidity and profitability was found to be insignificant and negative, indicating that liquidity has no influence in enhancing share price of listed pharmaceutical firms in Nigeria. The study therefore, recommended that firm size, leverage, and firm growth should be enhanced in view of their influence in increasing profitability, while liquidity should not be given any attention in an effort to raise profit. Uwuigbe, Uwuigbe, Adeyemo, and Ogunbajo (2016) examined the effect of corporate attributes on the profitability of companies by employing the annual reports of thirty selected companies listed on the Nigerian Stock Exchange (NSE) for a period of five years (2007-2011). They used Ordinary Least Square (OLS) regression to test for the effects of the selected corporate attributes on profitability. They tested for the

relationship between leverage, firm size, firm age and return on assets using Pearson's product moment correlation coefficient. Out of the three corporate attributes employed in the study, only firm age showed a positive statistically significant relationship with profitability measured by return on assets. They therefore observed that older firms perform better than younger ones. They recommended that companies should pay adequate attention to financial leverage, because firms that are highly leveraged are at the risk of insolvency. Their finding supports the argument that, older firms are likely to perform better than younger firms because they are more experienced, have enjoyed the benefits of learning, are not prone to the liabilities of inventiveness, and can therefore enjoy superior profitability

Olowokure et al. (2016) examined firm structural characteristics and financial reporting quality of listed deposit money banks in Nigeria. Using secondary data from the published reports of thirteen listed deposit money banks in Nigeria for over a period of ten years between 2015 and 2014, they sought to find the determinants of financial reporting quality and reported the findings of the impact of structural characteristics like age, size and level of leverage on financial reporting quality. Using prior studies as a guide, they also developed a model for loan loss provisions and generated the residuals, using these residuals known as abnormal loan loss provisions as the dependent variable for the multiple regression analysis, the study did not find any evidence of significant relationship between firm age, size, leverage and financial reporting quality.

RESEARCH

This study adopt an ex-post facto research design, which is appropriate for examining data that are already existing and cannot be manipulated or controlled by the researcher. The population of this study comprises all oil and gas companies listed on the Nigerian Stock Exchange (NSE) as of 31st December 2023. These companies are publicly listed and are required to publish annual reports, making them appropriate for a study that relies on secondary data. Listed below are the names of oil and gas companies in listed in Nigeria exchange group as December 31st 2023

1. Capital Oil (CAPOIL)
2. Conoil Plc (CONOIL)
3. Eterna Plc (ETERNA)
4. Ardova Plc
5. Japaul Oil & Maritime Services (JAPAULOIL)
6. MRS Oil Nigeria Plc (MRS)
7. Oando Plc (OANDO)
8. Rak Unity Petroleum (RAKUNITY)
9. Seplat Petroleum Development (SEPLAT)
10. Total Nigeria

Sample Size and Sampling Technique

The study adopts a purposive sampling technique. From a population of 10 listed oil and gas companies, a sample of all 10 companies with consistent and publicly available financial data between 2014 and 2023 was selected. Companies with incomplete or inconsistent data during the study period were excluded; however, all 10 met the inclusion criteria. This technique is justified based on the availability and consistency of data, which are crucial for robust statistical analysis. The purposive approach ensures that each selected firm contributes meaningfully to the analysis, thereby minimizing bias from missing data.

Method of Data Collection

Data for the study were obtained from secondary sources, particularly from the audited annual reports and financial statements of the selected oil and gas companies.

Techniques of Data Analysis

A computerized regression analysis was used to measure the impact of the independent variables on the dependent variable. Meanwhile, the study was patterned after the panel data methodology. This is because the data under investigation is both time series and cross sectional data. Specifically, three (3) variant results were first presented out of which the Fixed Effect Model (FEM) was considered. The three panel data variant presented are pooled ordinary least square (POLS), Fixed Effect Model (FEM), and Random Effect Model (REM). To determine which will best fit the study, both the Breusch Pagan Tests and Hausman diagnostic tests were considered. The Breusch Pagan Test was used to determine whether the POLS are most appropriate model for the study or the FEM. The null hypothesis of the Breusch Pagan Test maintains that the FEM are redundant, unnecessary, and is not the most appropriate model for the study. Instead, it suggests that the POLS are the most appropriate model for the study. However, the alternative hypothesis states that FEM is the most appropriate model for the study. The decision rule for accepting the null hypothesis is that the probability that will be obtained from the Chow-Test must be greater than 5% while the alternative hypothesis support that the probability that will be obtained from the Chow-Test must be less than 5%.

Furthermore, the Hausman diagnostic test will be used to will be used to determine whether the REM is the most appropriate model for the study or the FEM since it is errors correlated with regressions. The decision rule for accepting the null hypothesis is that the probability that will be obtained from the Hausman-Test must be greater than 5% while the alternative hypothesis support that the probability that will be obtained from the Hausman-Test must be less than 5%.

Various pre-estimation tests that will be conducted include descriptive statistics, correlation analysis, cross-sectional dependence test, variance inflation factors, panel unit root test, and panel co-integration test. The statistical package that will be used to run all the regressions in this study is Econometric views version 9.0. This package was chosen on the basis of amenability, global acceptability and user friendliness.

Model Specification

The econometric model for this study is adapted to examine how firm characteristics influence financial performance (measured by Return on Assets, ROA) in oil and gas companies:

ROAit=β0+β1LEVit+β2FAGEit+β3FSIZEit+β4PROFit+εitROA_{it} = \beta_0 + \beta_1LEV_{it} + \beta_2FAGE_{it} + \beta_3FSIZE_{it} + \beta_4PROF_{it} + \varepsilon_{it}ROAit =β0 +β1 LEVit +β2 FAGEit +β3 FSIZEit +β4 PROFit +εit

Where:

ROAit = Return on Assets for firm *i* in year *t* (proxy for financial performance)
LEVit = Financial Leverage (e.g., Total Debt to Total Assets ratio)
FAGEit = Firm Age (number of years since incorporation or listing)
FSIZEit = Firm Size (logarithm of total assets or total revenue)
PROFit = Profitability (Return on Equity)
β0\beta_0β0 = Intercept
β1−β4\beta_1 - \beta_4β1 −β4 = Coefficients of the independent variables

εit = Error term capturing unobserved influences

Apriori Expectations

Based on theoretical and empirical literature, the expected signs of the coefficients are as follows:

- $\beta_1 > 0$ or $\beta_1 < 0$: The effect of financial leverage on performance can be either positive or negative. A positive coefficient ($\beta_1 > 0$) suggests that leverage enhances performance, possibly due to effective use of borrowed funds. A negative coefficient ($\beta_1 < 0$) indicates that excessive debt may harm performance, especially if the firm lacks capital efficiency.
- $\beta_2 > 0$: Oil and gas firms (FAG) are expected to perform better, with $\beta_2 > 0$, due to their industry experience, operational expertise, and established market presence.

$\beta_3 > 0$: A positive sign for β_3 indicates that larger firms tend to perform better, likely benefiting from economies of scale, stronger market influence, and easier access to financing.

$\beta_4 > 0$: Higher profitability is anticipated to directly enhance overall financial performance, making a positive coefficient ($\beta_4 > 0$) consistent with expectations.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 4.1 below presents the annual average value, maximum value, minimum value, standard deviation value, Jarque-Bera statistics value alongside its probability values. The result is presented below:

Table 4.1: Summary of Descriptive Statistics

	ROA	FLV	FSZ	FAG
Mean	0.468056	1.527272	8.166491	32.31000
Median	0.347100	1.563100	8.609800	28.00000
Maximum	4.970000	2.918100	11.83370	61.00000
Minimum	-2.604000	0.116900	0.400000	18.00000
Std. Dev.	0.866070	0.756562	3.172801	12.05769
Skewness	2.310736	-0.305088	-1.078452	1.070657
Kurtosis	13.90734	2.197823	3.445035	2.799653
Jarque-Bera	584.7004	4.232511	20.20955	19.27235
Probability	0.000000	0.120482	0.000041	0.000065
Sum	46.80560	152.7272	816.6491	3231.000
Sum Sq. Dev.	74.25757	56.66625	996.5997	14393.39
Observations	100	100	100	100

Source: Econometric Views Version 9.0. (2025)

The descriptive statistics in Table 4.2 indicate that during the period of study, firm size (FSZ) recorded the highest mean value (8.1665), suggesting that oil and gas firms in Nigeria generally operated at a large scale. In contrast, return on assets (ROA) had the lowest mean value (0.4681), indicating that financial performance based on asset utilization was relatively modest among the sampled firms.

Furthermore, the standard deviation values provide insight into the variability of each variable around its mean. Specifically, the standard deviations for financial leverage (FLV), firm size (FSZ), and firm age (FAG) are all lower than their corresponding mean values. This indicates that these variables fluctuated moderately around their means,

reflecting relatively stable trends among the firms in the sample.

In contrast, ROA displays a higher standard deviation relative to its mean, suggesting greater variability in financial performance across the firms. This implies that while some oil and gas companies achieved strong asset-based returns, others experienced losses, resulting in wide dispersion in the dataset.

With respect to distribution, ROA exhibits strong positive skewness, indicating that a few firms recorded unusually high asset returns during the study period. Firm size (FSZ) is negatively skewed, reflecting a concentration of large firms in the sample with a few considerably smaller firms. The Jarque-Bera statistics and their associated p-values show that ROA, FSZ, and FAG significantly deviate from a normal distribution ($p < 0.05$). This deviation suggests the need for robust estimation techniques in subsequent regression analysis to correct for non-normality and improve inference reliability.

Correlation Analysis

The correlation matrix was used to determine the degree of relationship between variables of the study. These associations among the variables of the study are presented in Table below. It gives the existence of relationship among the variables which can be either positive or negative. Value closer to 1 depicts that the two variables are highly positively related/effecting each other indicating multi-collinearity. The result is presented below:

Table 4.3: Summary of Correlation Analysis

	ROA	FLV	FSZ	FAG
ROA	1.000000			
FLV	0.750960	1.000000		
FSZ	-0.691038	0.407318	1.000000	
FAG	-0.846170	0.443426	0.209318	1.000000

Source: Econometric Views Version 9.0. (2025)

Table 4.3 above presents the correlation coefficients among the variables used in this study, with Return on Assets (ROA) as the dependent variable, and Financial Leverage (FLV), Firm Size (FSZ), and Firm Age (FAG) as the independent variables.

The results show that financial leverage (FLV) has a strong positive correlation with ROA ($r = 0.751$), indicating that increased leverage is generally associated with improved financial performance among Nigerian oil and gas companies. This suggests that firms may be effectively utilizing debt to enhance returns on assets.

Conversely, firm size (FSZ) and firm age (FAG) both exhibit strong negative correlations with ROA, at -0.691 and -0.846 respectively. This implies that as firms grow larger or older, their efficiency in generating profits from assets tends to decline. This trend may stem from increased operational complexity, diminishing returns to scale, or challenges in adapting to market changes typically faced by older or larger firms.

Regarding the interrelationships among the independent variables: financial leverage (FLV) is positively correlated with firm size ($r = 0.407$) and firm age ($r = 0.443$), suggesting that larger and more established firms tend to rely more on debt financing. Additionally, firm size and firm age show a weaker but still positive correlation ($r = 0.209$), indicating that older firms are generally somewhat larger.

The correlation analysis highlights that FLV, FSZ, and FAG all demonstrate strong associations with ROA positive in the case of FLV and negative for FSZ and FAG

underscoring their importance in explaining variations in financial performance.

To ensure the regression results are not affected by multicollinearity, a Variance Inflation Factor (VIF) analysis was conducted. The results indicate that none of the variables exceed the commonly accepted VIF threshold of 10, confirming that multicollinearity is not a concern in the model.

Table 4.4: Variance Inflation Factors

Date: 06/05/25 Time: 04:16
Sample: 1 100
Included observations: 100

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.328923	30.51248	NA
FLV	0.154093	9.600788	3.212318
FSZ	0.034903	8.439279	3.398246
FAG	0.022397	5.355828	2.057941

Source: Econometric Views Version 9.0. (2025)

Regression Result

Prior to presenting the three panel data variants **(**Pooled OLS, Random Effect Model, and the Fixed Effect Model **),** the model was first subjected to Ramsey Reset test for testing if any of the study variables were omitted or not. The Ramsey reset test is presented in table 4.4 below:

Table 4.5: Ramsey RESET Test

Equation: UNTITLED
Specification: ROA C FLV FSZ FAG
Omitted Variables: Squares of fitted values

	Value	Df	Probability
t-statistic	1.805354	122	0.0735
F-statistic	3.259304	(1, 122)	0.0735
Likelihood ratio	3.427447	1	0.0641

F-test summary:

	Sum of Sq.	Df	Mean Squares
Test SSR	6.018622	1	6.018622
Restricted SSR	231.3035	123	1.880516
Unrestricted SSR	225.2848	122	1.846597

LR test summary:

	Value	Df
Restricted LogL	-221.9148	123
Unrestricted LogL	-	122

220.2010

Source: Econometric Views Version 9.0. (2025)

The Ramey Reset test in table 4.4 above reported a p-value of 0.0735 signaling that none of the study variables were omitted in the course of compilation. As such, the model is reliable for predication on this basis. This is premised on the fact that its p-value is greater than 5%. Premised on the above, the three panel data variants **(**Pooled OLS, Random Effect Model, and the Fixed Effect Model**)** alongside diagnostic tests conducted are summarized in table 4.5 below:

Table 4.6: Panel Data Variants

Study Variables	**Pooled OLS Result**	**Random Effect Model Result**	**Robust Fixed Effect Model Result**
Constant (C)	1.290257 (2.249723) {0.0262}	3.828695 (4.482726) {0.0000}	9.716769 (4.142498) {0.0001}
Financial leverage (FLV)	0.266286 (3.225826) {0.0016}	1.784079 (4.547593) (0.0000)	0.830612 (2.809499) {0.0059}
Firm size (FSZ)	-0.557557 (-2.984405) (0.0034)	-0.729092 (-3.247560) (0.0015)	-0.557557 (-2.984405) (0.0034)
Firm age (FAG)	-0.345816 (-2.310744) {0.0225}	-0.254960 (-1.885006) {0.0618}	-0.018769 (-0.108624) {0.9137}
R-squared	0.101880	0.213870	0.646286
Adjusted R-squared	0.058069	0.175522	0.626185
F-statistic	2.325456	5.577109	4.548557
Prob.(F-statistic)	0.036716	0.000038	0.000000
Durbin-Watson stat	1.199672	1.397245	2.19845
Test Cross-Section Random Effects			
Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**

Cross-section Random	38.886816	6	**0.0000**
Breusch-Pagan LM	575.9951	78	0.0000

Source: Econometric Views Version 9.0. (2025)

To identify the most appropriate model for analyzing the effect of firm characteristics on the financial performance of oil and gas companies in Nigeria, both the Breusch-Pagan Lagrange Multiplier (LM) test and the Hausman test were conducted. The results revealed a p-value of less than 0.05, indicating that the Fixed Effect Model (FEM) is more appropriate than the Pooled OLS and Random Effect Model.

To further enhance the reliability of the FEM, the study employed a robust correction for standard errors this adjusted model is referred to as the Robust Fixed Effect Model and is reported in Table 4.6.

The R-squared value of the robust fixed effect model (0.6463) shows that approximately 64.63% of the variation in Return on Assets (ROA) of listed oil and gas companies in Nigeria can be explained by financial leverage (FLV), firm size (FSZ), and firm age (FAG). The remaining 35.37% is attributed to factors outside the model.

The F-statistic of 4.5486 with a probability value of 0.0000 indicates that the overall model is statistically significant, and the explanatory variables jointly have a meaningful impact on ROA. This suggests a strong fit and affirms the validity of the regression outcome.

Finally, the Durbin-Watson statistic value of 2.198 implies that the model does not suffer from the problem of serial correlation, ensuring the robustness of the estimates

Test of Hypotheses

$H0_1$: Financial leverage (FLV) has no significant effect on financial performance of oil and gas companies in Nigeria.

The empirical evidence obtained from Table 4.6 shows financial leverage (FLV) has a positive and significant return on asset. Hence, the study rejected the null hypothesis one which states that financial leverage (FLV) has no significant effect on return on asset (ROA) of the financial performance of oil and gas companies in Nigeria. Thus, the study concludes that financial leverage (FLV) has a positive and significant effect on financial performance of oil and gas companies in Nigeria.

$H0_2$: Firm size (FSZ) has no significant effect on financial performance of oil and gas companies in Nigeria.

The empirical evidence obtained from Table 4.6 shows negative and significant relationship between Firms size (FSZ) and return on asset. Hence, the null hypothesis two which states that there is no significant relationship between Firm size (FSZ) and financial performance of the oil and gas companies in Nigeria is rejected. Thus, we conclude that there is significant relationship between Firm size (FSZ) and financial performance of Oil and gas companies quoted in the Nigerian Stock Exchange

$H0_3$: Firm Age (FAG) has no significant effect on financial performance of oil and gas companies in Nigeria.

The empirical evidence obtained from Table 4.6 shows that Firm Age (FAG) has a negative and insignificant effect on return on asset. Hence, the null hypothesis two which states that Firm Age (FAG) has no significant effects on financial performance of Oil and gas companies are retained. Thus, the study concludes that Firm Age (FAG) has a negative insignificant effect on on financial performance of Oil and gas companies

Discussion of Regression Result

This study observed the effect of firm characteristics on financial performance of oil and gas companies in Nigeria. The study is based on 10 oil and gas companies over the period of 2014 to 2023. The study made use of Financial leverage (FLV), Firm size (FSZ), and Firm age (FAG), as components of firm characteristics while return on asset (ROA) was used to proxy financial performance of the sampled companies. The study obtained data from annual reports of sampled oil and gas companies as contained in Nigerian Stock Exchange fact book. Specifically, the individual results are discussed below:

Financial leverage (FLV) and Financial Performance (ROA)

Empirical findings from Table 4.6 reveal that financial leverage (FLV) has a positive and statistically significant effect on the financial performance of oil and gas companies in Nigeria, as measured by return on assets (ROA). Specifically, the coefficient of 0.8306 indicates that a 1% increase in financial leverage leads to an estimated 83.06% increase in ROA, holding other variables constant. The associated t-value of 2.8095 and p-value of 0.0059 (less than the 5% significance threshold) confirm the robustness and reliability of this relationship. This outcome aligns with the a priori expectation of the study, suggesting that the strategic use of debt enhances profitability. The result supports the traditional theory of capital structure, which posits that debt financing can enhance firm value because it is generally less expensive than equity. As such, oil and gas firms that judiciously leverage debt may boost their asset productivity and overall performance. The significant positive impact of financial leverage on ROA indicates that well-managed leverage can serve as a strategic tool for enhancing performance in Nigeria's oil and gas industry, provided it is maintained within sustainable levels. The result is consistent with the findings of Diriyai and korolo (2023) who also reported a positive link between financial leverage and firm performance. However, it contrasts with studies such as Jibril and Idris (2022) who reported either an insignificant or negative relationship, potentially due to sectoral differences, risk profiles, or variations in debt management practices.

Firm size (FSZ) and Financial Performance (ROA)

The results from Table 4.6 indicate that firm size (FSZ) has a negative and statistically significant effect on the financial performance of oil and gas companies in Nigeria, as measured by return on assets (ROA). The coefficient of -0.5576 suggests that a 1% increase in firm size leads to a 0.5576% decrease in ROA, all else being equal. This relationship is statistically significant at the 5% level, as confirmed by the t-value of -2.9844 and p-value of 0.0034.

This negative association aligns with the a priori expectation of the study, indicating that as oil and gas firms grow larger, their asset efficiency may decline. One plausible explanation for this inverse relationship is that larger firms may face bureaucratic inefficiencies, higher overhead costs, and slower decision-making processes, which could hinder optimal asset utilization and profitability. In summary, the evidence suggests that increasing firm size does not necessarily translate to better financial performance in Nigeria's oil and gas sector. Instead, it may be accompanied by diminishing returns on asset utilization, highlighting the need for efficiency-focused growth strategies. The finding is consistent with the study by Mohammed and Usman (2016), which also reported a negative effect of firm size on financial performance. However, it contradicts the results of Adeyemo, and Ogunbajo (2016) who observed a positive or insignificant

relationship. These discrepancies may stem from differences in industry structure, firm characteristics, and macroeconomic environments across countries and sectors.

Firm age (FAG) and Financial Performance (ROA)

Empirical evidence from Table 4.6 indicates a negative and statistically insignificant relationship between firm age (FAG) and financial performance, as measured by Return on Assets (ROA), for listed oil and gas companies in Nigeria. The coefficient of -0.0188 suggests that a 1% increase in firm age leads to a marginal decrease of 0.0188% in ROA, although this effect is not statistically significant, as confirmed by a t-value of -0.1086 and a p-value of 0.9137.In conclusion, the analysis suggests that firm age does not significantly influence financial performance in the Nigerian oil and gas sector. Companies may therefore need to focus less on legacy structures and more on innovation, asset efficiency, and strategic reinvestment to drive profitability. This finding is consistent with the study of Kinyua & Ochieng (2022), who similarly reported a negative and insignificant effect of firm age on performance. However, it contrasts with the findings of Ganiyu, Adelopo, Rodionova, and Samuel (2019) and Dang, Bui, Dao, and Nguyen (2019), who observed a positive and significant relationship in different contexts.

CONCLUSIONS

This study investigated the effect of firm characteristics and financial performance of oil and gas companies listed on the Nigerian Stock Exchange, with a specific focus on financial leverage (FLV), firm size (FSZ), and firm age (FAG) as explanatory variables, and return on assets (ROA) as the measure of financial performance. The findings highlight that financial leverage positively and significantly influence the financial performance of oil and gas firms in Nigeria, underscoring the importance of strategic capital structure decisions. Conversely, firm size negatively and significantly affects financial performance, indicating that unchecked growth may lead to inefficiencies. Firm age, however, shows a negative but statistically insignificant impact, suggesting that maturity alone does not determine profitability. Therefore, policymakers and corporate managers should focus on these firm-specific characteristics leveraging debt effectively while managing firm growth to optimize shareholder value and ensure sustainable profitability in this capital-intensive industry.

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