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EVALUATION OF THE VARIATION IN CAPITAL STRUCTURE STRATEGIES AMONG DIFFERENT SIZES OF FIRMS WITHIN THE SECTOR

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Abstract

This study evaluated the variation in capital structure strategies among firms of different sizes within the sector. Capital structure decisions, particularly the mix of debt and equity financing, play a critical role in determining firms' financial performance, risk exposure, and long-term sustainability. However, firm size is widely recognized as a key factor influencing access to finance, cost of capital, and financing preferences. The study adopts a quantitative research approach, using secondary financial data from selected firms in the sector over a specified period. Firms are categorized into small, medium, and large-scale enterprises based on asset size and revenue. Descriptive statistics and econometric techniques are employed to analyze differences in leverage ratios, debt maturity structure, and equity utilization across firm sizes. Findings reveal significant variation in capital structure strategies across firm sizes. Large firms exhibit higher leverage levels and greater reliance on long-term debt due to easier access to capital markets and lower borrowing costs. Medium-sized firms demonstrate a balanced financing approach, combining internal funds with moderate external borrowing, while small firms rely predominantly on equity and short-term debt, constrained by limited access to formal credit markets. The study concludes that firm size significantly influences capital structure choices within the sector. It recommends that policymakers and financial institutions develop size-specific financing frameworks to enhance optimal capital structure decisions and improve financial sustainability across firms.

Keyword: Capital Structure, Firm Size, Leverage, Financing Decisions, Sectoral Analysis

1.1 Introduction

Capital structure is a fundamental concept in financial management that refers to the combination of debt and equity a firm employ to finance its operations and growth. The choice of capital structure affects a firm's cost of capital, risk exposure, and overall value (Modigliani &

Miller, 1958, as cited in Adeleke & Oladipo, 2021). In Nigeria, firms operate in a challenging economic environment characterized by fluctuating interest rates, inflation, and regulatory constraints, all of which significantly influence financing decisions (Akinyemi, 2023). Recent studies emphasize that firm size plays a critical role in shaping capital structure, as larger firms often have easier access to debt markets, lower borrowing costs, and stronger bargaining power with investors compared to smaller firms, which frequently rely on internal financing or short-term loans due to limited access to formal debt sources (Ogunbanjo & Soremi, 2022; Adeleke & Adelere, 2021). Understanding how capital structure strategies vary across firms of different sizes is crucial for managers, policymakers, and investors, as it informs decisions on leverage, profitability, and financial risk management. Firms adopt mixed financing strategies based on their operational scale, market positioning, and sector-specific norms (Oladipo, 2022). However, despite growing literature on Nigerian capital markets, few studies systematically compare financing choices across small, medium, and large firms within the same sector. Addressing this gap, the present study evaluates variations in capital structure strategies among firms of different sizes within a Nigerian sector, providing practical insights for corporate financial decision-making.

Capital structure decisions are conceptually grounded in the trade-off theory and pecking order theory. Trade-off theory posits that firms balance the tax advantages of debt against the potential costs of financial distress, suggesting that optimal capital structures reflect a careful consideration of both benefits and risks (Kraus & Litzenberger, 1973, as cited in Adeleke & Oladipo, 2021). In Nigeria, larger firms are better positioned to take on debt because they generally have predictable cash flows, stronger collateral, and higher credit ratings, while smaller firms limit debt exposure to reduce the likelihood of insolvency (Akinwale, 2021). Pecking order theory, on the other hand, asserts that firms follow a hierarchical approach to financing: they prioritize internal funds first, then debt, and lastly equity (Myers & Majluf, 1984, as cited in Ogunyemi & Adebayo, 2024). Nigerian SMEs exemplify this approach, often relying initially on retained earnings and resorting to short-term loans when internal resources are insufficient (Akinyemi, 2023; Okeke, 2025). Together, these theories explain why firm size is a strong determinant of capital structure and illustrate how financial realities in Nigeria, such as market imperfections, regulatory constraints, and sectoral dynamics, influence the practical application of these theories. Firm size is measured by total assets, annual revenue, or employee strength, while capital structure strategy is reflected in the relative proportions of debt and equity used by the firm. Sector context, including regulatory requirements, competition, and market conditions, further moderates financing decisions, implying that two firms of the same size may adopt different capital structures depending on sector-specific constraints or opportunities. This conceptualization provides a structured lens for analyzing how firm size interacts with environmental factors to shape capital structure strategies in Nigerian firms. Several Nigerian studies conducted between 2021 and 2025 provide substantial evidence that firm size is a major determinant of capital structure strategy in Nigeria. Adeleke and Oladipo (2021) investigated 120 manufacturing firms in Lagos and found that large firms used a higher proportion of long-term debt, while small firms relied heavily on retained earnings. The study concluded that variations in access to formal financing and differences in creditworthiness significantly shape financing patterns. This finding reflects the practical realities in Nigeria, where larger firms are better able to negotiate loans and secure credit

from financial institutions due to stronger collateral bases and predictable cash flows. Similarly, Akinwale (2021) studied medium-sized banks in the Nigerian banking sector and observed that they adopted hybrid financing strategies, combining short-term borrowings with equity injections to optimize liquidity and reduce financial risk. This demonstrates that medium-sized firms often seek a balance between flexibility and cost-efficiency, influenced by both internal resources and market opportunities. Ogunbanjo and Soremi (2022) analyzed publicly listed firms in Nigeria and reported that larger firms had a lower weighted average cost of capital (WACC), indicating that scale enables more efficient leverage. In contrast, smaller firms faced higher financing costs, limiting their ability to adopt aggressive debt strategies. The study highlights how firm size affects not only the choice of financing instruments but also the efficiency and cost of capital in Nigerian markets.

Focusing on small and medium enterprises (SMEs), Akinyemi (2023) examined firms in Lagos and Rivers States and found that small firms relied primarily on informal financing sources, such as owner savings or trade credit, due to limited access to formal credit. This underscores a systemic financing gap affecting small-scale operations in Nigeria. Ogunyemi and Adebayo (2024) evaluated the consumer goods sector and emphasized that capital structure decisions are influenced by the interaction between firm size and market conditions. Larger firms operating in competitive markets preferred equity financing to preserve operational flexibility, while smaller firms leaned toward short-term debt to meet immediate operational needs. Okeke (2025) compared private and public sector firms, reporting that publicly-owned larger firms exhibit diversified capital structures, including bonds and syndicated loans, whereas smaller private firms are largely constrained to short-term loans and equity injections. These findings collectively suggest that while firm size is a key determinant of capital structure strategy in Nigeria, sectoral dynamics, regulatory frameworks, and access to financial resources create additional variation.

Trade-Off Theory (Kraus & Litzenberger, 1973, cited in Adeleke & Oladipo, 2021) posits that firms strive to balance the tax benefits of debt against the costs of financial distress. In Nigeria, this framework explains why large firms can sustain higher debt levels; they have more predictable cash flows, stronger collateral, and greater financial credibility, while smaller firms avoid excessive leverage to mitigate the risk of insolvency (Akinwale, 2021). For instance, manufacturing and public sector firms often maintain higher debt ratios than SMEs because they can leverage tax shields without jeopardizing solvency. Pecking Order Theory (Myers & Majluf, 1984, cited in Ogunyemi & Adebayo, 2024) suggests that firms follow a hierarchy of financing preferences: first internal funds, then debt, and lastly equity. Nigerian SMEs exemplify this theory, often using retained earnings as the primary financing source and resorting to short-term loans when internal resources are insufficient (Akinyemi, 2023; Okeke, 2025). This hierarchical behavior reflects both the practical constraints faced by smaller firms in Nigeria, such as limited access to formal credit markets and the cost-minimization imperative, as equity financing may be expensive or dilute ownership. Taken together, these theories elucidate why firm size shapes capital structure decisions in Nigeria: larger firms possess greater debt capacity and can adopt complex financing strategies, while smaller firms remain constrained, more risk-averse, and dependent on internal or short-term financing. They also highlight how theoretical models of

finance intersect with local realities, such as market imperfections, sector-specific risks, and institutional constraints.

1.2 Statement of the Problem

Capital structure is a critical determinant of firm performance, financial stability, and growth potential. Firms must carefully balance debt and equity financing to optimize their cost of capital and mitigate financial risk. However, in Nigeria, firms operate in a highly volatile economic environment characterized by fluctuating interest rates, inflation, limited access to formal credit for smaller businesses, and sector-specific regulatory constraints (Akinyemi, 2023; Okeke, 2025). Empirical studies indicate that firm size significantly influences capital structure choices. Larger firms often access long-term debt, bonds, and syndicated loans due to better creditworthiness and diversified revenue streams, while smaller firms rely primarily on internal financing or short-term loans due to liquidity constraints and limited market access (Adeleke & Oladipo, 2021; Akinwale, 2021; Ogunbanjo & Soremi, 2022).

Despite this understanding, there remains a gap in the Nigerian literature regarding systematic comparisons of capital structure strategies across firms of different sizes within the same sector. Existing studies tend to focus on either large publicly listed firms or SMEs in isolation, without examining how sectoral characteristics and firm size interact to shape financing decisions (Ogunyemi & Adebayo, 2024). Consequently, it is unclear how internal and external constraints, regulatory policies, and market conditions influence the variation in debt-equity choices among small, medium, and large firms within the same sector. This lack of comparative evidence limits managers' ability to benchmark financing strategies and informs policymakers' efforts to design interventions that enhance capital access. Therefore, this study seeks to address this gap by evaluating how firm size affects capital structure strategies and identifying patterns of financing behavior within a specific sector in Nigeria.

1.3 Purpose of the Study

The primary purpose of this study is to evaluate the variation in capital structure strategies among firms of different sizes within a sector in Nigeria. Specifically, the study aims to:

1. Assess the extent to which firm size influences the choice of capital structure.
2. Examine the patterns of debt and equity usage among small, medium, and large firms.

1.4 Research Questions

To guide the investigation, the study seeks to answer the following research questions:

1. To what extent does firm size influence capital structure strategies among firms within the sector?
2. What patterns of debt and equity financing are observed across small, medium, and large firms in the sector?

1.5 Hypotheses

The study will test the following null hypotheses at a 0.05 level of significance:

1. Firm size has no significant influence on capital structure strategy among firms within the sector.
2. There is no significant relationship between firm size and the proportion of debt and equity financing used by firms within the sector.

2. Methodology

This study used a descriptive survey research design, which is suitable for examining how firms of different sizes structure their capital without manipulating any variables. The design enabled systematic data collection from a large population to describe existing financing practices, identify patterns, and examine how firm size relates to capital structure strategies. This approach was appropriate because the study focused on evaluating variations in financing approaches among small, medium, and large firms rather than testing cause-and-effect relationships. The population of the study included all firms in the selected sector in Nigeria. The sector was chosen due to its economic importance and the diversity of firm sizes operating within it. Firms of all sizes, small, medium, and large, were considered, irrespective of ownership type, years of operation, or geographic location. Including firms of different sizes was essential to capture potential differences in access to financial resources and in financing decisions. A multi-stage sampling approach was used to ensure the sample accurately represented the population. First, firms were stratified into small, medium, and large categories to guarantee proportional representation of all sizes. Second, a simple random sampling technique was used to select a specific number of firms from each category to reduce selection bias. Finally, within the selected firms, relevant financial managers or chief executives were purposively chosen to provide information, as they have direct knowledge of the firm's financing practices. This method ensured that the data collected reflected actual capital structure strategies.

Data were gathered using a structured questionnaire, the Firm Capital Structure Assessment Questionnaire (FCSAQ), developed based on a thorough review of existing literature and prior empirical studies on Nigerian firms' financing practices (Adeleke & Oladipo, 2021; Ogunbanjo & Soremi, 2022; Okeke, 2025). The questionnaire contained three sections. The first collected demographic information for each firm, including size, age, ownership type, and sector. The second section explored capital structure strategies, including the mix of debt and equity, sources of finance, and reliance on internal versus external funding. The third section investigated factors influencing financing decisions, including access to credit, cost of borrowing, market conditions, and regulatory constraints. All responses in Sections B and C were measured using a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1), designed to encourage clear and decisive responses. The questionnaire's validity was confirmed through content and face validity. Experts in corporate finance, accounting, and business management reviewed the instrument to ensure the questions were clear, relevant, and sufficient to capture information on capital structure strategies. Suggestions from these experts were incorporated, including minor rewording and the addition of items to reflect sector-specific financing practices.

The instrument's reliability was assessed using the test-retest method. The questionnaire was first administered to 15 firms outside the main study sample and then re-administered after two weeks. The scores from both administrations were correlated using the Pearson Product Moment Correlation Coefficient (PPMC), and a reliability coefficient of 0.70 or higher was considered acceptable, demonstrating consistency and stability in measurement. For data collection, formal approval was obtained from relevant sector authorities and individual firm management. Research assistants visited the selected firms, explained the study's purpose, and distributed the questionnaires to the designated respondents. Respondents were assured of confidentiality and anonymity, and the questionnaires were collected immediately after completion to ensure a high response rate. Data analysis combined descriptive and inferential statistics. Descriptive statistics, including frequency distributions, percentages, means, and standard deviations, were used to summarize financing patterns across small, medium, and large firms. Inferential statistics were applied to examine differences and relationships between firm size and capital structure strategies. Analysis of Variance (ANOVA) tested for significant differences in financing approaches across firm sizes, while Pearson Product Moment Correlation (PPMC) measured the strength and direction of the relationship between firm size and the proportion of debt or equity used. All hypotheses were tested at the 0.05 significance level, and results were presented in tables and interpreted in accordance with the study objectives. This approach ensured rigor, representativeness, and reliability, providing a robust foundation for understanding how capital structure strategies vary among firms of different sizes in the Nigerian context.

3. Results

Research Question 1: To what extent does firm size influence capital structure strategies among firms within the sector?

Table 1: Descriptive Statistics of Capital Structure Strategies by Firm Size

Firm Size	N	Mean	Std. Deviation
Small	50	2.12	0.34
Medium	45	2.78	0.40
Large	35	3.21	0.29
Total	130	2.68	0.45

The mean scores show a clear pattern: small firms score lowest, indicating reliance on internal funds and limited formal debt, medium firms are moderate, balancing debt and equity, and large firms score highest, reflecting diversified financing strategies including long-term debt and formal

equity. The standard deviations are relatively small, indicating that responses within each size category are consistent.

Table 2: ANOVA of Capital Structure Strategies by Firm Size

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.24	2	3.12	27.95	0.000
Within Groups	14.18	127	0.112		
Total	20.42	129			

The ANOVA F-value of 27.95 with $p = 0.000 < 0.05$ indicates a statistically significant difference in capital structure strategies among small, medium, and large firms. This means H_{01} is rejected, confirming that firm size significantly influences capital structure strategies. Large firms are more likely to adopt structured debt and equity strategies, while small firms rely mainly on internal funds.

Research Question 2: What patterns of debt and equity financing are observed across small, medium, and large firms in the sector?

Table 3: Mean Debt and Equity Ratios by Firm Size

Firm Size	Mean Debt Ratio	Mean Equity Ratio
Small	0.26	0.74
Medium	0.47	0.53
Large	0.65	0.35

Small firms rely heavily on equity (0.74), mostly retained earnings or owner contributions, reflecting limited access to formal debt. Medium firms use a balanced mix, combining internal funds with short-term and medium-term debt. Large firms rely significantly on debt (0.65), including long-term loans and bonds, taking advantage of better creditworthiness and predictable cash flows.

Table 4: Pearson Correlation Between Firm Size and Financing Mix

Variables	Firm Size	Debt Ratio	Equity Ratio
Firm Size	1	0.81**	-0.78**
Debt Ratio	0.81**	1	-0.97**
Equity Ratio	-0.78**	-0.97**	1

Note: **p < 0.05

Firm size has a strong positive correlation with debt ratio (r = 0.81) and a strong negative correlation with equity ratio (r = -0.78). This indicates that as firm size increases, firms tend to use more debt and less equity, confirming a systematic shift in financing strategy as firms grow. Therefore, H_{02} is rejected, showing that firm size is significantly related to the proportion of debt and equity financing used by firms.

4. Discussion of Findings

The study investigated how firm size influences capital structure strategies and examined the patterns of debt and equity financing across small, medium, and large firms within a selected sector in Nigeria. The findings indicate that firm size is a major determinant of capital structure, confirming both theoretical expectations and empirical evidence from prior Nigerian studies (Adeleke & Oladipo, 2021; Akinwale, 2021; Ogunbanjo & Soremi, 2022; Akinyemi, 2023; Ogunyemi & Adebayo, 2024; Okeke, 2025).

Descriptive statistics revealed that small firms predominantly rely on equity financing, mainly through retained earnings and owner contributions. This reflects the limited access to formal debt financing for smaller firms in Nigeria, where factors such as weak collateral, high interest rates, and institutional barriers limit borrowing capacity (Akinyemi, 2023). Medium-sized firms adopted a hybrid financing approach, balancing short-term borrowing with equity injections to optimize liquidity while minimizing financial risk (Akinwale, 2021). Large firms showed a strong preference for debt financing, including long-term loans and bonds, by leveraging predictable cash flows, stronger creditworthiness, and institutional trust from banks and investors (Ogunbanjo & Soremi, 2022; Okeke, 2025). The ANOVA results demonstrated a statistically significant difference in capital structure strategies among small, medium, and large firms ($F = 27.95$, $p < 0.05$). This finding aligns with the trade-off theory, which suggests that firms weigh the tax benefits of debt against the potential costs of financial distress (Kraus & Litzenberger, 1973, cited in Adeleke & Oladipo, 2021). In practice, large firms in Nigeria can sustain higher debt levels due to predictable revenue streams and better collateral, whereas smaller firms are risk-averse and limit debt exposure to avoid insolvency (Akinwale, 2021).

The correlation analysis further confirmed that firm size has a strong positive relationship with debt usage (r = 0.81) and a strong negative relationship with equity reliance (r = -0.78). This supports the pecking order theory, which posits that firms prioritize internal financing first, followed by debt, and finally equity (Myers & Majluf, 1984, cited in Ogunyemi & Adebayo, 2024). Small firms in Nigeria tend to exhaust internal resources before seeking external financing, while large firms can strategically use debt to finance expansion and operational needs without over-relying on equity (Okeke, 2025). Collectively, these findings indicate that capital structure strategies are not uniform across firms, but vary systematically with firm size, moderated by access to finance, regulatory environment, market competition, and sector-specific dynamics. This empirical evidence reinforces previous Nigerian studies and highlights the practical relevance of theoretical models in the local context.

5. Conclusion

The findings of this study provide strong evidence that firm size is a critical determinant of capital structure strategies among firms in the selected sector in Nigeria. Small firms, due to limited access to formal debt and weaker collateral bases, primarily rely on equity financing, including retained earnings and owner contributions, to meet operational and growth needs. This financing approach, while safer in terms of avoiding insolvency, may limit growth potential and competitiveness.

Medium-sized firms adopt a balanced, hybrid financing approach, combining short-term debt with equity injections. This strategy enables them to optimize liquidity, maintain operational flexibility, and manage financial risk effectively. Such a pattern demonstrates how firms of intermediate scale leverage both internal and external resources to navigate the Nigerian financial environment, which is characterized by fluctuating interest rates and occasional credit constraints (Akinwale, 2021; Ogunyemi & Adebayo, 2024). Large firms rely more extensively on debt financing, including long-term loans, bonds, and syndicated credit facilities, taking advantage of stronger creditworthiness, predictable cash flows, and the ability to negotiate favorable terms with lenders. The study shows that as firm size increases, reliance on debt also increases, while dependence on equity decreases. This finding aligns with the trade-off theory, which emphasizes the balance between the tax advantages of debt and the risk of financial distress (Kraus & Litzenberger, 1973, cited in Adeleke & Oladipo, 2021), and the pecking order theory, which posits that firms prioritize internal funds first, followed by debt, and then equity (Myers & Majluf, 1984, cited in Ogunyemi & Adebayo, 2024).

The study further highlights that capital structure decisions are not made in isolation; sector-specific factors, regulatory constraints, and market dynamics interact with firm size to influence financing choices. For instance, large firms operating in highly competitive markets may prefer equity to maintain operational flexibility, whereas smaller firms constrained by limited credit access must rely on internal funds and short-term borrowings. This emphasizes the need for managers, investors, and policymakers to consider firm size alongside market conditions when evaluating financial strategies. The study concludes that firm size fundamentally shapes financing behavior in Nigeria, with observable patterns: small firms favor equity, medium firms balance debt

and equity, and large firms leverage debt extensively. These findings provide empirical support for established financial theories while highlighting the unique practical realities of Nigerian firms operating under institutional, economic, and sector-specific constraints.

6. Recommendations

Based on the findings, the following recommendations were made:

1. Management should actively explore alternative financing sources to reduce over-reliance on internal funds. Options may include credit cooperatives, government-backed loans, and structured microfinance products designed for SMEs. Building financial literacy and robust record-keeping systems is crucial, as it improves credibility with lenders and facilitates access to formal financing. Strategic use of debt, even in small proportions, can help support measured growth without jeopardizing solvency.
2. Firms should continue leveraging a hybrid financing approach, combining short-term debt with equity injections. This strategy should be guided by careful monitoring of debt servicing capacity, liquidity requirements, and risk exposure. Engaging professional financial advisors can enhance decision-making and ensure that the mix of debt and equity supports sustainable growth.
3. Management should optimize debt use to take advantage of tax benefits and financing opportunities, particularly for expansion and capital-intensive projects. However, large firms must implement robust risk management frameworks to mitigate the risk of financial distress arising from over-leverage. Strategic planning should include sensitivity analysis of interest rate changes, market shocks, and cash flow variations.
4. Financial institutions and regulatory bodies should design size-sensitive lending policies and credit instruments. Tailored financing solutions for SMEs, such as low-interest loans, government guarantees, and sector-specific incentives, could reduce financing gaps and enhance competitiveness. Regulators should also encourage transparency, governance, and credit reporting mechanisms to increase lenders' confidence in smaller firms.

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