# FIRM ATTRIBUTES AND PERFORMANCE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

Ikponmwosa Michael Igbinovia[1], Abinokhauno Michael Ewela[2]

[1&2]Department of Accounting, Edo State University Uzairue, Nigeria

ikponmwosa.igbinovia@edouniversity.edu.ng

## ABSTRACT

This study examines the effect of firm attributes on financial performance of quoted consumer goods firms in Nigeria for twenty (20) years (2003 to 2022). It evaluates the effect of debt, firm size, and firm age, on return on assets and Tobins Q of quoted consumer goods firms in Nigeria. The study employed the Panel Data Regression techniques using secondary data obtained from annual financial statement of five selected firms in Nigeria. The findings of the study revealed that debt has a negative significant impact on performance measured by the return on assets and a similar result was found when performance was measured using Tobin's Q of sampled consumer goods firms. A positive insignificant effect was observed for equity, using both ROA and Tobin's Q as performance measures. Firm age has a positive significant effect on both return on assets and Tobin's Q. Firm size was found to have a positive significant effect on both measures of the dependent variables. The study recommends that managers of firm should determine and employ optimum use of debt, considering the findings on debt negative impact on firm performance and the risk of bankruptcy associated with excessive debt usage.

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## INTRODUCTION

Financial performance reveals how a firm's activities, strategies and policies affect its bottom line. It is used to evaluate the overall wellbeing of an organization over a specified time period. The combination of debt and equity is key to business operations. Among other expectations, an enhanced financial performance and overall wellbeing of the firm is envisaged from an optimum use of firm attributes including debt and equity (Pratiksha et al., 2024). These attributes explains the differences in firms operating in the same sector and could account for their performance (Kouser et al. 2012).

While most researchers like Abubakar et al., (2024); Ylber et al., (2023) posit that an optimal use of firm attributes can impact financial performance, or a negative relationship exist between selected firm attributes and financial performance (Abdur-Rouf (2015); Saputra, Achsani and Anggraeni (2015); Nassar (2016); and Aziz and Abbas (2019), there is no consensus on the effect of firm attributes on firm financial performance, especially in Nigeria (Juwita, 2018). Also, the study adopted two measures of financial performance to accommodate both internal dynamics (ROA) and market performance (Tobins Q) and concentrated on a few reputable firms

that have been in operation for many years unlike the relatively new listed consumer goods firms. This gave rise to few firms in our sample.

There exists a plethora of researches on the influence of capital structure and firms' attributes on financial performance of publicly traded Nigerian consumer goods companies (Babalola, 2013). The study focused on very few firms (five) over a long period of twenty years 2003-2022. This is to concentrated on a few reputable firms that have been in operation for many years unlike the relatively newly listed consumer goods firms. This ensured fewer cross sections and capture more of the trend, contrary to most prior studies which have focused on getting more cross sections.

The objective of the study was to examined the influence of debt, equity, firm age and firm size on the financial performance of selected consumer goods companies.

The study utilized recent data for a period of twenty years with a concentrated number of firms to provide empirical evidence of firm attributes and firm financial performance in Nigeria. The study used two measures of firm performance, capturing the internal mechanisms and operations as well as the market dynamics.

**LITERATURE REVIEW**

**Concept of Firm Performance**

The evaluation of the outcome of a company's strategies, operations and policies in monetary terms that are relevant to stakeholders such as creditors, shareholders, and potential investors is known as its financial performance. According to Leah (2008), operating income, cash flow from operations, revenue from operations, and total unit sales are the key indicators of financial performance. As such, an analyst or investor should dig further into financial statements to check on reducing debt or margin growth rates. Firm and market-based performance are two categories into which company performance may be divided. The directors' and other management committees' successful cost control and strategy are reflected in the performance of the company.

Financial ratios such as returns on assets, profit before interest and tax, profit before tax, and profit margin are frequently used to analyze a company's performance. Return on assets and return on equity are two examples of firm performance indicators. Market-based performance measures a company's effectiveness in the marketplace. It displays the company's overall performance, which is frequently assessed using metrics like stock price, dividend per share, Tobin Q, earnings per share, and price earnings ratio. These financial performance proxies are chosen in a subjective and relative manner. In the field of fundamental research in finance, both market- and firm-based financial performance indicators are areas of grave concern (Kouser et al., 2012).

Therefore, proxies for variables of interest with explicit rationale are frequently needed in empirical finance and accounting investigations. Proxy selection is crucial, though, as the wrong proxy may lead to the erroneous acceptance or rejection of a hypothesis. In fact, proxies lead to joint tests of the selected proxies' validity and the presented hypotheses. The ideal source for empirical proxies would be a theoretical model that supports their use under various presumptions. Firm- based and market-based financial performance metrics are used in this study to capture financial performance. The return on assets (ROA), a firm-based financial

performance metric, is employed in this investigation. It reflects the efficiency and productivity of how the assets of the business are being used to generate income during a period (Kouser et al., 2012). The market base measure is the Tobins Q, which reflects the market performance of a firm's stock.

## Capital Structure and Firm Financial Performance

The market value and capital expenses of the company are significantly impacted by the capital structure decision (Abubakar, 2024). According to Akinsulire (2002), the use of debt capital, culminates in increased earnings per share for equity holders. Put differently, while leverage does not have the ability to alter the firms' overall projected profitability, it can impact the earnings that remain for the shareholders. A company's capital structure is the culmination of its capital composition. When making financing decisions, it is imperative to take into account the impact of capital on a company's financial performance. This is because consumer goods companies require adequate capital to conduct their operations efficiently and avoid negative performance effects. The various forms of capital that can be utilized to manage various business organizations include share capital, retained earnings, short-term debt, and long-term loans. Appropriate capital source selection, however, may benefit a business's performance; nonetheless, ineffective use of these resources may result in financial regression (Abubakar & Olowe, 2019). As a result, using a variety of financial sources to fund the business operations of the companies may help to reduce financing costs, boost net returns, and improve overall performance (Ali, 2020). While relying too heavily on equity capital alone could increase financing costs, Anizawati, et al. (2016) discovered that employing only one capital source can nonetheless boost a company's profitability over time. This is due to the fact that using borrowing financing alone may expose the business to significant financial risk. The least expensive source of funding for business operations is retained earnings. Nonetheless, employing it protects companies from having to pay costs related to, among other things, obtaining equity, repaying loans, or paying interest. If businesses have enough profits set aside, they will be better off and able to spend their excess cash in profitable projects for growth and performance improvement (Oyetade, 2014).

After retained earnings, short-term debt is the next economic source of funding for businesses. Because long-term loans are difficult to obtain, they make up a sizable portion of the total debt of the majority of small and medium-sized businesses worldwide (Onoja & Ovayioza, 2015).

Long-term debt, according to Robert and Mohamed (2015), serves as a means of filling in the gaps left by financial shortages in the corporate sector, particularly when there are insufficient funds. For most medium-sized businesses worldwide, it is an external financing source. The issuing of shares is a type of funding known as share capital. Shares may be issued by public subscriptions, offers for sale, right issues, bonus issues, debt conversions, private placements, and tender offers for sale, according to Abubakar and Olowe (2019).

The financing of an organization's assets is determined by its financial structure. A company's assets may be financed through stock ownership, long-term debt, and short-term loans. The financial structure includes all of the company's liabilities, while the capital structure solely includes long-term debt and equity. A company's capital structure can be influenced by a number of factors, including its competitive position, asset structure, sales growth rate and stability, management attitudes, and lender perceptions (Akeem, et al., 2014). Choosing the kind of

securities to be issued and the proportionate part of each kind of security, including shares and debentures, in the overall capitalization are the first steps in developing a capital structure, according to Trivedi (2012). Every commercial security system has advantages and disadvantages of its own. Consequently, it may be risky or unprofitable to include one asset in the capital structure too frequently. For instance, a business may not be able to benefit from trading on equity and may not be able to meet its objective of giving its owners the highest returns if its capital structure is primarily composed of equity capital and has insufficient debt capital.

Businesses usually use preferred shares and common equity to raise necessary funds. A balanced approach to risk and projected return is the aim of capital structure policy. Akeem et al. (2014) state that the organization needs to consider its financial flexibility, tax positions, business risk, and managerial aggressiveness or conservatism. These components are necessary to formulate the target capital structure, even though operating conditions may cause the actual capital structure to differ. Akeem et al. (2014) assert that top managers would be able to precisely determine the best balance between debt and equity for each company with the use of contemporary financial procedures. This is not the case as managers are prone to boost the company's expenses by buying anything they want and surrounding themselves with luxury and facilities because they do not share from the company's profit as shareholders.

**Firm Age and Firm Financial Performance**

Capabilities and resources are a company's most important assets. Each organization has a unique personality as a result of these features, which distinguish them apart from one another and determine how well they perform (Hills & Jones, 2009). The resources of the organization include its structure, goals, incentive and punishment systems, management tactics, prevailing culture, and leadership (Olumide 2010).

Acompany's age is the epoch of time, commonly specified in years, after it initially commenced operation or went public (Umar & Sylvanus, 2015). As a result, firm age symbolizes the overall amount of information and expertise a company has gathered. According to Colombelli et al. (2014), as firms get older, their ability to function well reduces. The number and quality of a company's resources are thus influenced by its age, which aids in its development through time. They said that businesses might perform best in their infancy and early phases and might have greater potential then. Businesses may consequently be redesigned or revitalized as a result.

In their 2015 study, Umar and Sylvanus investigated the influence of firm age on performance of firms. They reported a negative nexus among selected manufacturing firms. Equally, the deduction aligns with the conclusions drawn by Nyamiobo et al. (2018) on the impact of firm attributes on the financial outcomes of listed companies in Kenya, who reported a significant nexus between firm age and the financial success of enterprises.

**2.1.5 Firm Size and Financial Performance**

Since firm size is a major determinant of financial performance, several studies have made efforts to investigate its influence on financial performance. However, the findings have been erratic and contentious. For company executives across all industries, financial performance is critical because it affects an organization's wellbeing and its ability to survive. Since it reveals

managerial efficacy and efficiency in allocating resources, the strong performance benefits the nation's economy as a whole (Shaheen & Malik, 2012). Given their increased resources, larger organizations are able to invest more.

Ulil et al. (2013) state that a corporation's size can affect its financial success and that a company's performance gets better as it gets bigger. The size impact, however, could be detrimental to companies that grow unnecessarily big because of bureaucracy and other problems. Nonetheless, studies have shown that a company's size significantly and favorably affects its financial performance (Abbasi & Malik, 2015). The position is supported by studies such as (Foyeke et al., 2014; Shaheen & Malik, 2012) that indicate larger businesses are generally better equipped to handle negative fluctuations in the sector than smaller ones. Furthermore, larger companies have the capacity to hire employees with higher levels of professional knowledge than smaller ones.

Babalola (2013) asserts that a company's level of influence on its stakeholders is a function of its size. Big businesses therefore usually do better than small businesses. Asserting that a company's success depends on its size because of the economies of scale phenomena, his findings, which point to the characteristics that improve corporate performance, indicated that the nature of the relationship between firm size and corporate performance is a significant determinant in company success. Aza (2018) found that because of scale diseconomies, business size has a negligible and negative effect on financial performance. According to Oyelade (2019), company size in Nigeria has a positive and statistically significant effect on firm performance.

**Empirical Review**

**Debt and Firm Performance**

Abubakar *et al.* (2024) analyzed the weighted average cost of capital's mediating effect on the capital structure and financial performance nexus of consumer goods companies between 2005 and 2019. The study's findings showed that the debt ratio significantly affects financial success as determined by ROA. In a similar vein, the debt ratio and financial performance are significantly mediated by the weighted average cost of capital. Abubakar and Olowe (2019) used a cross-sectional time-series data set that included 10 firms and covered seven years (2012-2018) to examine the impact of capital structure on the financial performance of selected quoted firms in Nigeria. Purposively, ten (10) listed companies on the Group of Stock Exchange Nigeria Limited were chosen as a sample. A panel multiple regression model was employed in the study to analyze the data. The research findings indicate that short-term debt has a noteworthy favorable impact on the financial success of the companies. According to the report, the Securities and Exchange Commission need to encourage the nation's listed companies to pursue larger loan amounts since doing so improves their financial standing. From a static trade-off perspective, Babalola (2014) examined thirty-one manufacturing companies over a fourteen-year period (1999-2012) with audited financial records. Utilizing triangulation analysis, his findings demonstrated that capital structure is a compromise between the benefits and drawbacks of debt. Additionally, the claim that large businesses are more likely to continue performing better than middle-sized businesses at the same debt level has been refuted. In an earlier study, Babalola (2013) examined a sample of ten companies from an agency and static trade-off perspective across a ten-year period (2000-2009). He employed regression analysis to test the hypothesis that

corporate performance is a nonlinear function of capital structure and came to the conclusion that Nigeria's manufacturing sector's capital structure is compatible with trade-off theory.

For a span of 22 years, from 1990 to 2012, Tahmoorespour, et al. (2015) investigated the connection between a company's financial structure and stock performance of eight nations in Asia-Pacific. The study finds that the kind of market and industry have an impact on the financial structure. The regression results indicate that market value and debt to asset ratios have a substantial impact on a firm's return at the 5% and 10% significance levels, respectively, in the consumer services sector. Return is negatively impacted by debt to asset ratio. Over a nine-year period (1999–2007), Simon-Oken and Afolabi (2011) examined five listed corporations from the perspectives of agency cost theory and trade-off. Using a panel data regression model, they found that there was a positive correlation between a company's success and its debt-to-equity ratio and its equity financing. A negative correlation can also be shown between a company's success and debt financing because of the high cost of borrowing in the nation. We therefore hypothesize that Debt has no significant effect on firm performance.

**Theoretical Framework**

The trade-off theory is the framework which underpins the study. The traditional version of the theory was first used by Kraus and Litzenberger (1973), in the study of how to balance the advantages of debt repayment above bankruptcy's deadweight costs. In essence, the trade-off theory of financial structure involves balancing the advantages of equity with the disadvantages of debt. The cost of financial distress and agency costs are the two main perceptions that the trade-off theory of financial structure emphasized. The trade-off theory of financial structure serves a significant function in explaining why businesses typically have a combination of equity and debt financing. That is, there are benefits to financing with debt, such as tax advantages, but there are also drawbacks, such as the costs of financial distress brought on by the bankruptcy of the debt and non-bankruptcy costs like employee departure, supplier demands for unfavorable terms of payment, internal strife among bondholders and stakeholders (Frank & Goyal, 2011).

The agency costs from agency theory can also be included as a cost of debt in the trade-off theory to explain why corporations do not have 100% debt as predicted by Modigliani and Miller (1958). A company would arrive at an ideal financial structure, in accordance with the statistical trade-off hypothesis, if it could find a balance between the expenses of debt and its related tax advantages. It is expected that a company's financial structure will appropriately combine debt and equity in order to achieve a balance between the advantages and drawbacks associated with each type of financing. Because there will be higher costs as compared to cost equity, increasing the debt level purely for tax shielding purposes cannot effectively minimize the cost of capital. Additionally, because of the high cost of funds and the expectations of return from debenture holders, raising the level of debt may increase the firm's risk of insolvency. As a result, businesses are implementing a debt-to-equity ratio that can reduce their cost of capital and raise stock price. The trade-off theory suggests that in order to balance the advantages and disadvantages of debt financing, businesses should have their own ideal debt ratio (Frank & Goyal, 2011).

## Equity and Firm Performance

Yahaya and Andou (2022) considered the performance of six listed Nigerian conglomerate companies from 2009 to 2013 in terms of return on total assets and how that relates to various capital structure factors. To investigate the connection between capital structure and financial performance, a regression model was estimated. The outcome disproves any possible correlation between borrowed capital and the financial performance of the company. Nonetheless, the findings demonstrate a positive relationship between equity capital and financial performance. Additionally, there is proof that financial performance and size are favorably correlated. Etale (2020) examined the connection between listed companies' profitability and capital structure on the Ghanaian stock exchange using a panel data study. The ratio of short-term debt to total capital, or SDA, was found to have a strong positive association with return on equity. Additionally, the data revealed a negative correlation between long-term debt and return on equity (ROE) as well as a positive correlation between total debt and ROE profitability, suggesting a greater reliance on debt financing by businesses.

Ronoh (2015) investigated the impact of financial structure on the financial performance of banks in Kenya. The panel data for income statements and finances that covered the five years from 2009 to 2013 was used. Performance was quantified in terms of ROA and ROE and was considered as the dependent variable in the multiple regression models. The findings showed that the financial performance of Kenya's listed commercial banks, as determined by return on assets, was negatively and significantly correlated with deposits, debt, and equity.

Waweru and Kanhuna. (2015) employed a descriptive research design with a census survey of 49 businesses in their study titled "Does Capital Structure Matter? " and employed a descriptive research design with a census study of 49 organizations between 2009 and 2013. *It conforms with empirical finding in studies such as Zeitun and Tian (2007),* (2018), a company that uses equity financing can perform better because equity holders, as residual claimants, have direct power over resource allocation to maximize shareholder wealth.

Lu, Tsai, and Yen's (2010) study sought to determine whether a relationship existed between company value and financial performance (FP) in a subset of Taiwanese enterprises. Empirically, there was a reported negligible correlation between business value and FP. We therefore hypothesize that Equity has no significant effect on firm performance.

## Firm Size and Firm Performance

Amato and Burson (2007) investigated the size-profit link for financial services industry companies. They looked at the relationship's cubic and linear forms. The findings showed a negative correlation between a firm's size and profitability in terms of the linear connection, yet this correlation was not statistically significant. However, they also discovered evidence of a cubic link between company size and ROA.

From 1998 to 2014, Kumar and Kaur (2016) investigated firm size and profitability in the Indian auto sector. They used a cross-sectional analysis using a linear regression model covering the years 1998 to 2014 to analyze this link. Oyetade (2014) examined the factors influencing the capital structure of a sample of Nigerian non-financial enterprises. The fixed effect regression model demonstrated that liquidity has a positive impact on leverage of Nigerian non-financial

firms. Kartikasari and Merianti (2016) discovered a statistically significant positive correlation between Tobin's Q and business size, which was calculated as the natural log of total assets. Their research concentrated on how a company's size and leverage affected its profitability. The study's findings were conflicting; while one suggested a positive correlation between firm size and Tobin's Q, another found no such correlation between firm size, profitability, and Tobin's Q. The study's sample for the years 2009–2014 was made up of 100 manufacturing companies that met the eligibility requirements and were listed on the Indonesia Stock Exchange. We therefore hypothesize that firm size has no significant effect on firm performance.

**Firm Age and Firm Performance**

Wahab et al. (2022) found a marginally positive relationship between an organization's age and its performance. It implies that the age of the businesses has little bearing on how well they function commercially. In specifically, on a sample of the listed agricultural and agro-allied enterprises in Nigeria, company age was shown to be non-statistically significant with a positive coefficient sign. It suggests that as they become older, their performance can be affected by their age, which could work to their advantage since it could mean more experience. However, the current finding is similar to that of Nyamiobo et al. (2018) about the influence of selected firm attributes on the performance of listed enterprises in Kenya. They found a correlation, albeit statistically significant, between firm age and businesses' financial success. We therefore hypothesize that firm age has no significant effect on firm performance.

**Methodology**

**Research Design**

The study employs a longitudinal research design. The rationale behind selecting this research design stems from the fact that it entails periodic observations of the same variables.
The study's population is the twenty-one (21) listed consumer goods firms in the Nigerian Exchange Group (NGX) Plc's as at December 31, 2022. The study covered a twenty-year period (2003–2022). To ascertain firm attributes and performance of manufacturing firms, the sample focused on five consumer good firms listed in the Nigerian Exchange Group. They include Dangote Sugar Refinery Plc, Cadbury Nigeria Plc, Nestle Nigeria Plc, Nigerian Breweries Plc and Gunness Nigeria Plc. The study used judgmental sampling procedures. The choice of these firms is informed by the need to concentrate on a few firms that have been existing for many years unlike the relatively new listed consumers goods firms. This is to get fewer cross sections and capture more of the trend contrary to prior studies which have focused on getting more cross sections. Secondary data were sourced from the sampled companies' financial statements, spanning from 2003 to 2022. The Statement of Comprehensive Income and Statement of Financial Position are the sections of the annual reports from which the data were taken.

**Measurement and variable operationalisation**
**Table 1:       Measurement of variables**

| Dependent variables | | |
|---|---|---|
| **variables name** | **variables symbols** | **variables explanation** |
| Return on Assets | ROA | Profit after tax expressed in relation to |

| | | total Assets (Achieng *et al.* 2018) |
|---|---|---|
| Tobins' Q | TOBIN'S Q | Market value / total assets or Market value of Equity + Market value of liabilities / Book value of equity + market value of liabilities (Juwita, 2018). |
| Independent variables | | |
| Shareholders' Equity | SHEQ | Total Equity divided by Total Assets (Achieng *et al.* 2018) |
| Debt | DEBTA | Total liabilities/ Total Assets (Abubakar *et al.* 2024) |
| Firm Size | FSIZE | Log of total assets (Achieng *et al.* 2018) |
| Firm Age | FAGE | Years since incorporation (Nyamiobo et al. 2018) |

Source: Researcher's compilation 2024

**Model Specification**
The study adapted Akinyomi (2013) model and the trade-off theory. In order to represent the dependent variable, the study used Return on Assets (ROA) and TOBIN's Q. The independent variables are Shareholder equity, Total Firm Size (FSIZ), Firm age (FAGE), Firm size (FRSZ). As a result, the researcher suggests the panel information model listed below:

**Functional form of Equations:**

ROA = f (SHEQ, DEBTA, FSIZ, FAGE)    -      -      -      -      i

TOBIN's Q = f (SHEQ, DEBTA, FSIZ, FAGE)    -      -      -      ii

While the econometric form of the model is:

$ROA_{it} = \beta_0 + \beta_1 SHEQ_{it} + \beta_2 DEBTA_{it} + \beta_3 FSIZ_{it} + \beta_4 FAGE_{it} + \mu_{it}$ - -   iii
$TOBIN's Q_{it} = \beta_0 + \beta_1 SHEQ_{it} + \beta_2 DEBTA_{it} + \beta_3 FSIZ_{it} + \beta_4 FAGE_{it} + \mu_{it}$ ---iv

**Results and Discussion0**
For arriving at a dependable and unbiased analysis, secondary data were obtained from the annual reports of firms from 2003- 2022. Results are explicitly presented below:

**Descriptive Statistics**
Table 2 below provides an overview of the descriptive analysis for each variable in the study.

**Table 2: Results of the Descriptive Statistics**

| | ROA | TOBIN'S Q | FAGE | FSZ | DEBTA | SHEQ |
|---|---|---|---|---|---|---|
| Mean | 0.13605 | 13.8700 | 5.540000 | 3.7508 | 0.535 | 0.3480 |
| Median | 0.12756 | 14.0000 | 6.000000 | 25012 | 0.4256 | 0.4560 |
| Maximum | 0.37653 | 20.0000 | 9.000000 | 7.6209 | 0.77653 | 0.8504 |
| Minimum | -0.04506 | 5.00000 | 1.000000 | 1.8724 | 0.24506 | 0.30400 |

| Std. Dev. | 0.09039 | 3.66709 | 1.217880 | 1.1909 | 1.1923 | 4.20765 |
| Jarque-Bera | 3.89411 | 4.89405 | 154.1196 | 1848.19 | 3.13236 | 5.56478 |
| Probability | 0.14269 | 0.08655 | 0.000000 | 0.00000 | 0.04543 | 0.03465 |
| Observations | 100 | 100 | 100 | 100 | 100 | 100 |

Source: Researchers Computation (E-views 9) 2024.

The result of the descriptive statistics shows that the mean value of Return on assets (ROA) over the 100 observations period is 0.136052, with a minimum value of -0.045060, maximum value of 0.376530. The standard deviation of ROA shows 0.090394 with 100 observations.

The result of the descriptive statistics shows that the mean value of TOBIN'S Q over the 100 observations period is 13.87000, with a minimum value of 5.000000, maximum value of 20.00000. The standard deviation of ROE shows 3.667094 with 100 observations.

The descriptive statistics of firm age (FAGE) shows a mean value of 5.54000, median of 6.00000, minimum value of 1.000000, maximum value 5.00000. The standard deviation of FAGE shows 1.217880 with 100 observations.

The descriptive statistics of firm size (FSIZE) shows a mean value of 3.75, median of 2505512, minimum value of 1.8724, maximum value 7.62. The standard deviation of FSIZE shows 1.19 with 100 observations.

The descriptive statistics of debt (DEBTA) shows a mean value of 0.535 median of 0.4256, minimum value of 0.24506 maximum value 0.77653. The standard deviation of DEBTA shows 1.1923 with 100 observations.

**Correlation Analysis**

Pearson Correlation was used to measure the direction and degree of linear relationship of between and among the study variables with a view to check for the possibility of multi-collinearity in a data set. The direction speaks of either positive or negative relationship while the magnitude account for strong, low or weak relationship. The Pearson Coefficient is presented in table 3 below:

**Table 3: Summary of Pearson Correlation**

| Variable | ROA | TOBIN'S Q | SHEQ | DEBTA | BIND | FSIZE | FAGE |
|---|---|---|---|---|---|---|---|
| ROA | 1.0000 | | | | | | |
| TOBIN's Q | 0.2207 | 1.0000 | | | | | |
| SHEQ | 0.5692 | 0.1602 | 1.0000 | | | | |
| DEBTA | 0.8785 | 0.2719 | 0.3176 | 1.0000 | | | |
| FSIZE | 0.4568 | 0.3832 | 0.9383 | 0.2393 | 0.7638 | 1.0000 | |
| FAGE | 0.3849 | 0.4839 | 0.5647 | 0.3894 | 0.5849 | 0.4839 | 1.0000 |

**Source: Econometric Views version 9.0 (2024)**

The Pearson correlation reported that all the financial performance proxies by (Return on Assets (ROA) and TOBIN'S Q) are positively correlated. In terms of magnitude, all variables are moderately correlated with both dependent variables. Furthermore, the Pearson Correlation reported the presence of very low correlation between the independent variables themselves which indicates that there is low tendency of multi-collinearity in the data series. To further buttress this claim, we subjected the model to both Multicollinearity test and Heteroskedasticity test. Each of the results is presented in the next section.

**Multicollinearity Test**
The results are presented below:
**Table 4: Multi-Collinearity Test**

| Variables | Variance Inflation Factor (VIF) | Tolerance Value (TV)=1/VIF |
|---|---|---|
| SHEQ | 2.720660 | 0.36756 |
| DEBTA | 2.836401 | 0.35256 |
| FSIZE | 2.178321 | 0.35272 |
| FAGE | 3.92022 | 0.43829 |
| Source: Researcher's Computation Based on E-Views 9.0 Output (2024) | | |

Since none of the study variables reported a VIF value more than 10 and that none reported a TV higher than 1, we confidently conclude that the series does not have any multicollinearity issue.

**Table 5:** Heteroskedasticity Test: Breusch-Pagan-Godfrey

| | | | |
|---|---|---|---|
| F-statistic | 0.489058 | Prob. F(4,17) | 0.7438 |
| Obs*R-squared | 2.270339 | Prob. Chi-Square(4) | 0.6862 |
| Scaled explained SS | 1.140177 | Prob. Chi-Square(4) | 0.8878 |

**Source: Econometric Views version 9.0 (2024)**

According to the Breusch-Pagan-Godfrey test above with Obs*R-squared value of 2.27-3399 alongside Prob. Chi-Square (4) value of 0.6862), we can confidently say that the model is Homoskedastic (has equal mean and variance). By implication, the model is fit for prediction since it was able to satisfy the OLS assumption of presence of Homoskedasticity.

**Table 6. Regression Result**

| Dependent Variable: ROA Method: Panel Least Squares Total panel (balanced) observations: 100; Periods: 20 Cross -sections: 5 | | | | |
|---|---|---|---|---|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| DEBTA | - 34.54267 | 0.016868 | -3.556474 | 0.0115 |
| FSIZE | 10.66082 | 175357.5 | -0.607948 | 0.0234 |

| | | | | |
|---|---|---|---|---|
| FAGE | 36.33581 | 14.53229 | 0.070147 | 0.0342 |
| SHEQ | 0.077064 | 0.105408 | 3.739963 | 0.0013 |
| C | 23.7333 | 3245545 | 0.731260 | 0.04654 |
| R-square | 0.580271 | Mean dependent var | 6132769 | |
| Adjusted R-squared | 0.521010 | S.D dependent var | 16979824 | |
| F-statistics | 174.0715 | Durbin - Watson stat | 1.782692 | |
| Prob. (F-statistic) | 0.000110 | | | |
| Source: E-views 9.0 output 2024 | | | | |

The adjusted R-squared value indicates that 52.10% of variation in return on assets (ROA) is explained or predicted by the explanatory variables of debt (DEBTA), Firm size (FSIZE), firm age (FAGE), Shareholders equity (SHEQ), board independent (BINDEP), while the remaining 47.899% was taken care by the error term, consistent with earlier studies by Kumar and Singh (2012).

The study found that debt is negative and statistically significant with a robust coefficient of -34.54267, t-statistic value of -3.556474 and probability value of 0.0115. The implication of this finding is that the debt usage does not enhance financial performance of companies hence it is ill-health to a company. The justification for this finding is that firms with low total liabilities will have high return on assets vis – a – vis a better reputation and good public confidence. Therefore, the higher debt of a company lower return on asset of the company. The pro-value of 0.0115 < 0.05 shows that debt has a significant relationship, influence, effects on return on assets of quoted consumer goods firms in Nigeria. *It is in tandem with Zeitun and Tian (2007).*

The study found that firm size positive and statistically significant with a robust coefficient of 10.6608, t-statistic value of 3.60794 and probability value of 0.0234. The implication of this finding is that the firm size result to financial performance of companies hence it is health to a company. The justification for this finding is that firms with higher firm size will have high return on assets vis – a – vis a better reputation and good public confidence. Therefore, the higher firm size of a company higher return on asset of the company. The pro-value of 0.0234 < 0.05 shows that firm size has a significant relationship, influence, effects on return on assets of quoted consumer goods firms in Nigeria. It conforms with the finding of *Foyeke et al. (2014).*

The study found that firm age positive and statistically significant with a robust coefficient of 36.33581, t-statistic value of 3.70147 and probability value of 0.0342. The implication of this finding is that the firm age result to financial performance of companies hence it is health to a company. The justification for this finding is that firms with higher firm age will have high return on assets vis – a – vis a better reputation and good public confidence. Therefore, the higher firm age of a company higher return on asset of the company. The pro-value of 0.0342 < 0.05 shows that firm age has a significant relationship, influence, effects on return on assets of quoted consumer goods firms in Nigeria. It corroborates the results of *Mboi et al. (2018); Mallinguh, et al. (2020).*

**Table 7. Regression Result**

**Dependent Variable: TOBIN's Q**
**Method: Panel Least Squares**
**Total panel (balanced) observations: 100; Periods: 20 Cross -sections: 5**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| DEBTA | - 6.34245 | 1.90548 | -3.35256 | 0.0475 |
| FSIZE | 6229.699 | 175357.5 | -0.46738 | 0.0349 |
| FAGE | 34015.81 | 13.3229 | 0.15730 | 0.0453 |
| SHEQ | 12.3280 | 108452.08 | 3.26743 | 0.0351 |
| C | 283919.0 | 218730.0 | 0.33465 | 0.0423 |
| R-square | 0.567301 | Mean dependent var | 48001467 | |
| Adj. R-squared | 0.53439 | S.D dependent var | 16979824 | |
| F-statistics | 261.4446 | Durbin - Watson stat | 1.608268 | |
| Prob. (F-statistic) | 0.001011 | | | |

*Source: E-views 9.0 correlation output 2024*

The adjusted R-squared value indicates that about 53.44% of the variation in Tobin's Q is explained or predicted by the explanatory variables of Debt (DEBTA), Firm size (FSIZE), firm age (FAGE), Shareholders equity (SHEQ), board independent (BINDEP), while the remaining 46.56% was taken care by the error term. This is consistent with earlier studies by Kumar and Singh (2012) which reported adjusted R-squared value of 52.3%.

The study found that the effect of debt is negative and statistically significant with a robust coefficient of -6.34245, t-statistic value of --3.35256 and probability value of 0.0475. The implication of this finding is that debt engenders financial performance of companies hence it is ill-health to a company. The justification for this finding is that firms with low debt will have high return on assets vis – a – vis a better reputation and good public confidence. Therefore, higher debt in a company lowers its return on asset. The p-value of 0.0475 < 0.05 shows that debt has a significant effect on Tobin's Q of quoted consumer goods firms in Nigeria. We therefore reject the null hypothesis that debt has no significant impact on firm performance.

It conforms with empirical finding in studies such as Zeitun and Tian (2007), King and Santor (2008); Ebaid (2009), Asimakopoulos et al. (2009), Majumdar and Sen (2010), Salim and Yadav (2012) on the relationship between leverage and firm performance. The work of Ebaid (2009) on Egyptian firm shows negative relationship between leverage and firm performance. Similar negative result was documented in the study of Salam and Yadav (2012) that reported negative relationship between leverage and firm performance of listed firms in Malaysia. Similar negative result was documented in the work of Zeitun and Tian (2007) on Jordanian listed firms. The negative significant nexus between debt and firm performance contradicts the findings in the study of Margaritis and Psillaki (2007) that reported positive relationship between leverage and firm performance of New Zealand companies. Similarly, in the study carried out by Margaritis

and Psillaki (2010) using sample of French firms where they reported positive relationship between leverage and performance thereby supports the agency cost hypothesis that higher leverage is related to improved performance. The same was found by San and Heng (2011) for Malaysian firms and Majumdar and Sen (2010) for Indian firms, and Abor (2005) for firms in Ghana.

Equity was found to exert a positive but insignificant effect of firm performance. We therefore accept the null hypothesis that equity has no significant impact on firm performance. This result contradicts the outcome of Yahaya and Andou (2022); Ronoh (2015) in the literature.

The study found that firm size positive and statistically significant with a robust coefficient of 6229.699, t-statistic value of 4.466738 and probability value of 0.0349. The implication of this finding is that the firm size result to financial performance of companies hence it is health to a company. The justification for this finding is that firms with higher firm size will have high return on assets vis – a – vis a better reputation and good public confidence. Therefore, the higher firm size of a company higher return on asset of the company. The pro-value of $0.0349 < 0.05$ shows that firm size has a significant relationship, influence, effects on return on Tobin's Q of quoted consumer goods firms in Nigeria. We therefore reject the null hypothesis that firm size has no significant impact on firm performance.

This indicates that larger firms are more likely to capitalize on economies of scale, gaining increased negotiating power with their clients and suppliers, ultimately leading to better performance. This aligns with the results of Colombelli et al. (2014), Foyeke et al. (2014), Mboi et al. (2018), Jubril and Idris (2022), Serrasqueiro et al. (2008), and Ulil et al. (2013). In contrast, the research by Wahab et al. (2022) found no noteworthy relationship between firm size and financial performance. Aza (2018) discovered a negative impact on the connection between firm size and financial performance.

The study found that firm age positive and statistically significant with a robust coefficient of 34015.81, t-statistic value of 3.15730 and probability value of 0.0453. The implication of this finding is that the firm age result to financial performance of companies hence it is health to a company. The justification for this finding is that firms with higher firm age will have high return on assets vis – a – vis a better reputation and good public confidence. Therefore, the higher firm age of a company higher return on asset of the company. The pro-value of $0.0453 < 0.05$ shows that firm age has a significant relationship, influence, effects on Tobin's Q of quoted consumer goods firms in Nigeria. We therefore reject the null hypothesis that firm age has no significant impact on firm performance.

*This finding was supported by the empirical results of Haykir and Celik (2018); Mboi et al. (2018); Mallinguh, et al. (2020) and Wahab et al. (2022) who found a positive relationship between firm age and financial performance. However, the result of Colombelli et al. (2014), Legesse and Guo (2020), and Pervan, Pervan and Ćurak (2017) asserted that firm age has an adverse effect on financial performance.*

Equity has a positive insignificant impact on firm performance of sampled firms. This is in tandem with the findings of Khalaf (2013), Oke and Afolabi (2011); Githire and Muturi (2016).. However, the finding contradicts those of Akeem et al. (2014) and Ronoh and Ntoiti (2015).

## Conclusion and Recommendations

The study investigated the relevance of debt and other firm characteristics on financial performance in selected consumer goods firms in Nigeria. From the study, it was observed that debt has a negative significant impact on performance measured by the return on assets and a similar result was found when performance was measured using Tobin's Q of sampled consumer goods firms. Firm age has a positive significant effect on return on assets and a positive significant effect on Tobin's Q of quoted consumer goods firms in Nigeria. Firm size was seen to have a positive significant effect on both measures of the dependent variables.

The uniqueness of the study is in the use of recent data for a period of twenty years with a concentrated number of firms to provide empirical evidence on firm attributes and firm financial performance in Nigeria. The study used two measures of firm financial performance, capturing the internal mechanisms and operations as well as the market dynamics.
From the findings of the analysis, the following recommendations are offered.

1. Managers should strive to determine and employ optimum use of debt, because of debt's negative impact on firm performance and the risk of bankruptcy associated with excessive debt usage.

2. Earnings should be re-invested into firms as internal source of equity. However, this should be done with caution (dividends still have to be paid) to maintain investors' confidence.

3. Further studiers should consider increasing the number of firms and the number of years to improve on the firm year observations. Other researches could examine the nexus in other sectors of the Nigerian stock market

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