

## Firm Attributes and Profitability of Publicly Listed Non-Financial Companies: Evidence from Nigeria

**\*IHENYEN J. Confidence PhD<sup>1</sup> & EBIPUADO Ombu FCA<sup>2</sup>**

<sup>1&2</sup>Department of Accounting, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.

**\*Corresponding Author:** [ihenvenconfidence99@gmail.com](mailto:ihenvenconfidence99@gmail.com)

### Abstract

*The principal objective of this study was to examine the relationship between firm attributes and profitability of publicly traded non-financial enterprises in Nigeria. An ex-post facto research design was used and as of December 31, 2022, the population comprised all 116 publicly traded non-financial firms quoted on the Nigerian Exchange Group. The research utilised purposive sampling in order to identify and include fifty (50) non-financial companies. The profitability data, including return on assets and firm attributes such as size, leverage, and liquidity, were gotten from the yearly statements of publicly traded non-financial companies from 2012 to 2022. Utilising a multiple regression estimate technique, the analysis of the data reveals that company size, liquidity, and leverage are the most significant determinants of profitability for publicly traded non-financial enterprises in Nigeria. The study concludes that firm attributes are vital metrics in determining profitability of publicly listed non-financial companies in Nigeria. The research proposed that for non-financial companies' management to raise profitability, they should be diligent in their pursuit of methods to optimise and enhance asset utilisation while maximising resource utilisation throughout the methods used in manufacturing and the final product's delivery.*

**Keywords:** Firm attributes; Profitability; Return on assets; Liquidity; Assets; Firm size

### 1. Introduction

The connection between corporate characteristics and business profitability has attracted a series of academic debates in both advanced and emerging countries due to management questions in ascertaining the financial health, growth, profitability, value, and sustainability of companies. The higher the profitability of a company, the better the financial position of the business (Abdullahi, 2019). In the accounting literature, return on asset (ROA) has been employed as a stand-in for profitability or performance (Ahmed, Naveed, & Usman, 2020). Businesses need to leverage assets to produce positive net present value via investments in order to increase their financial viability (Amjad, 2019). In general, there are three (3) primary methods of financing a business: issuing shares, using retained profits, or taking out loans via debt instruments. These various forms of funding combine to form the capital structures of the companies. Maximising shareholder value or profitability is one of a company's primary goals (Annalien, 2019). The purpose of decision management is to ensure that their activities impact the overall profitability of the firm. According to Dogan (2019), the recognised operational environment and the unique attributes of the firms have an impact on its actions Doyle, 2017). In the view of Kester (2017), the firm-specific attributes summed up include liquidity position, asset level, size of firm, firm growth, and

stability, among others.

These identified factors are clearly described as the internal factors that influence firms' profitability. Malik (2020) stated that firm attributes include firm size, growth, liquidity, investment opportunity, risk and tangibility, and asset level. Previous research in the fields of finance, accounting, and strategic management—which are somewhat connected to this research but not directly—has mostly focused on the characteristics of businesses and their profitability level; hence, this research attempts to x-ray the effect of selected firms' attributes (firm size, liquidity, and leverage) on firms' level of profitability, and this study focused on publicly listed non-financial companies in Nigeria from 2012–2022. This study was motivated by the need to fill the lacuna in the accounting literature on what is known about the relationship between firms' attributes and profitability of publicly listed non-financial companies in Nigeria. The remaining section of this paper is divided into: Review of Related Literature; Data and Methods; Results; Conclusion; and Recommendations

## **2. Literature Review**

### **2.1 Conceptual Review**

#### **2.1.1 Firm Profitability**

The literature has long established that the profitability of corporate organisations has been a prominent focal point for management experts, investors, and researchers alike. Considering the aforementioned perspective, it can be posited that profitability assumes paramount significance and serves as a steadfast gauge of corporate expansion, owing to its capacity to provide a comprehensive assessment of companies' aptitude to augment their revenue streams (Usman, 2020). Thus, the pursuit of profitability assumes paramount significance within the realm of financial management, as it aligns with the overarching objective of maximising the wealth of company proprietors. This, in turn, serves as a reliable indicator of enhanced financial performance (Bauer, 2021). Profitability, or the concept of profit, can be defined as the surplus of revenue obtained from a particular endeavour, surpassing the corresponding expenses incurred during a specific time frame. It is imperative for every enterprise to generate ample profits in order to ensure its sustained viability and enduring expansion over an extended duration. It serves as a barometer of economic advancement, facilitating enhanced national revenue and the elevation of societal well-being. Undoubtedly, the pursuit of profit is a justifiable objective; however, it is imperative that management refrain from excessively prioritising profit maximisation. Instead, they ought to diligently endeavour to optimise profit while concurrently considering the well-being of society (Frank & Goyal, 2019).

Profit is not solely confined to being a remuneration for proprietors; rather, it bears a significant correlation with the welfare of various strata within the societal framework. Profit serves as the quintessential metric for evaluating not only economic prowess but also managerial efficacy and societal aspirations (Mohammed & Usman, 2018). Profitability refers to the inherent capability of a company to generate financial gain through the culmination of its various business endeavours. This statement elucidates the capacity of management to effectively generate financial gains by optimising the utilisation of all available resources within the market (Johnson & Soenen, 2019). According to the scholarly work of Alhassan, Bajaher, and Alsherhri (2018), the notion of firms' profitability can be delineated as the inherent ability of a specific investment to engender a fiscal advantage through its utilisation. Nevertheless, it is imperative to acknowledge that the concept of profitability should not be confused with that of efficiency.

Profitability is a quantitative metric that serves as an indicator of operational

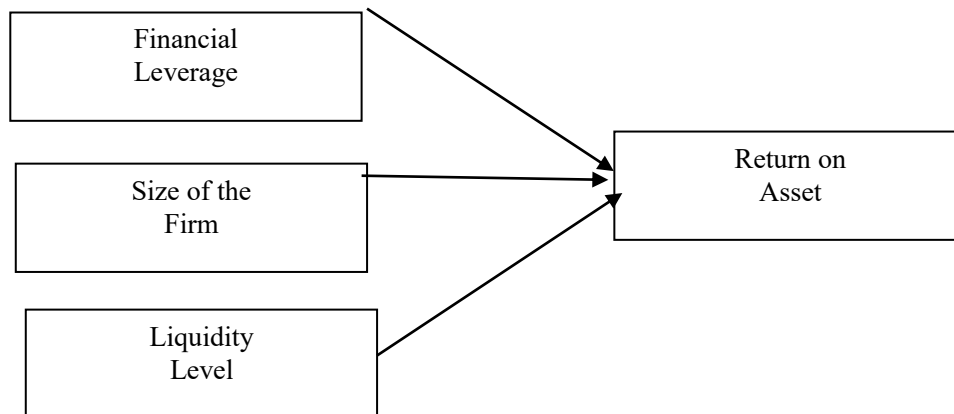
effectiveness and is widely recognised as a gauge of efficiency and a compass for enhanced efficiency in organisational management. The metrics of return on equity and return on assets stand as the preeminent indicators of a company's profitability. In the present investigation, the metric of return on assets was employed as a surrogate measure for the profitability of corporations. The return on assets metric serves as a measure of the efficacy with which management leverages assets to generate profits for the benefit of shareholders. The primary preoccupation of shareholders lies in the profitability of a firm, as it serves as a reliable indicator for forecasting the forthcoming earnings of said firm (Alhassan et al., 2018).

According to conventional financial literature, it is posited that enterprises that generate substantial profits possess the capacity to employ a greater amount of debt, as they are inherently less susceptible to the perils of insolvency and financial turmoil. The assertion put forth by Daniel and Tilahun (2012) is substantiated by their claim that firms with higher profitability possess a greater ability to secure loans, as debt providers exhibit a heightened willingness to extend funds due to the reduced likelihood of default when compared to less profitable firms; same is peculiar to return on assets, the size of the firm and the level of liquidity position of companies.

#### **2.1.2 Firm Attributes**

Firm attributes are those that are primarily within management's purview as well as leadership (Myers, 2019). Firm attributes encompassed firm size, age, liquidity, asset base, leverage, sales growth among others. On the other hand, the non-firm attributes include but not limited to those dynamics that are beyond management control (Raja, 2021) and they include interest rate, gross domestic product and industry size. This analysis suggests that a combination of firm-specific traits, which are internal attributes, and macroeconomic variables, which include external attributes, primarily affect a company's profitability. Consequently, substantial evidence exists to support the notion that the distinctive qualities of firms, spanning across various industries and even within a particular sector, exhibit considerable variation. This supports Myer's (2019) claim that due to idiosyncratic factors unique to each company, the characteristics of firms within various industries may change. The works of Rajan (2018) and Raja (2021) demonstrate that the main goal of empirical research to date has been to recognise the various elements that may have an effect on a company's profitability. Numerous factors resulting from both theoretical and empirical investigations have aided in the clarification of the relationship between business attributes and financial gain.

According to Rajni and Kawalpreet (2019), it is widely acknowledged that the presence of non-current assets, a non-debt tax shield, investment opportunities, and the scale of a business all contribute to the amplification of a company's leverage. In a parallel vein, an assortment of elements encompassing the oscillation of share prices, expenditures on advertising, the spectre of bankruptcy, and the distinctiveness of the product all coalesce to engender a decline in leverage (Rajan, 2018; Ogunbajo, 2018). The literature frequently highlights the dimensions of a company's magnitude, expansion, liquidity, business risks, and asset composition as the most commonly discussed attributes of a firm. These qualities hold considerable importance in both developed and developing economies.



*Figure 1 showed the conceptual model of the relationship between the dependent variable (which is return on assets) and the independent variables of the study – financial leverage, size of the firm and liquidity level*

**Source: Authors' Design**

## 2.2 Theoretical Review

The foundation of this study was firmly rooted in resource-based theory. The resource-based theory, also referred to as the theory of resource-based approach, pertains to the examination of a business's competitive advantage through a comprehensive analysis of its resources. As posited by Pujiarto (2018), an enterprise can attain a competitive edge and achieve commendable fiscal prowess through the acquisition, mastery, and effective utilisation of pivotal strategic assets, encompassing both tangible and intangible resources, in conjunction with the inherent capabilities of said organisation. This implies that a company can attain a competitive edge and effectively contend with its rivals by optimising the utilisation of its resources.

Resources encompass a diverse array of elements, including but not limited to natural resources, human capital, employees, management personnel, and stakeholders, among others. The utilisation of resource-based theory enables the identification and analysis of strategic endeavours undertaken by a company, with the aim of harnessing the synergistic potential inherent in the amalgamation of their skill sets, capabilities, assets, and intangible assets (Charles, 2018). The theory of resource-based analysis pertains to the discernment that the distinctive attributes and qualities inherent within a company have the prospective to significantly influence the general viability of said company. The present research study delves into the intricate aspects of firm characteristics, specifically focusing on the nuanced dimensions of firm age, firm size, liquidity, and leverage within the company.

The present investigation is grounded in resource-based theory, as elucidated by Wernerfelt in the year 1984. Peace and Robinson (2020) provide a comprehensive elucidation of resource-based theory, which serves as a framework for scrutinising and discerning a company's strategic edges by meticulously evaluating its unique amalgamation of assets, competences, and intangibles in the context of its organisational structure. This theory pertains to the intrinsic attributes of a firm and their impact on the overall performance of said firm. The perspective posits that an organisation can be perceived as a conglomeration of various resources that are amalgamated to cultivate organisational capabilities, thereby enabling the attainment of profitability that surpasses the average benchmark (Grant, 2019).

### 3. Methodology

The current investigation used an *ex-post-facto* design. The study population comprised all one hundred and sixteen (116) publicly listed non-financial firms registered on the Nigerian Exchange Group. Purposive sampling was used in selecting fifty (50) companies out of the 116 companies. Relevant data were collected from the audited yearly financial reports of the selected non-financial corporations in Nigeria from 2012-2022. Data obtained were subjected to descriptive statistics which analyzed the characteristics of the variables used in the study. Also, correlation analysis was done to determine the extent of association and presence or otherwise of multicollinearity problems in the model of the study. Furthermore, inferential statistics was used in establishing whether firm attributes have significant effects on the level of profitability.

Multiple regression models were used in determining the impact of the predictor variable on the dependent variable. The ordinary least square models for the study are specified as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \mu_{it} \dots \dots \dots i$$

Where:  $Y_{it}$  is the dependent variable;  $\beta_0$  is the intercept;  $\beta_1$  is the slope; firm value is the independent variable. Applying the above model, the following regression model was expressed in their explicit form.

$$PROF_{it} = \beta_0 + \beta_1 FZ_{it} + \beta_2 LIQ_{it} + \mu_{it} \dots \dots \dots ii$$

$$PROF_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 LIQ_{it} + \mu_{it} \dots \dots \dots iii$$

Where: FZ = Firm size; LEV= Leverage; LIQ = Liquidity level; PROF = Profitability

### 4. Data Analysis and Discussion of Findings

#### 4.1 Descriptive Statistics

The results of the study are presented in tabular forms and on the following basis: descriptive; post-estimation and inferential statistics

**Table 1: Summary of Descriptive Statistics**

Statistics	PROF	FZ	LEV	LIQ
Mean	0.8611	0.2388	0.5588	0.5508
Std. Dev.	0.3380	0.4783	0.1838	0.7839
Skewness	0.3939	0.4883	0.4830	0.0393
Kurtosis	2.4839	2.4840	2.4843	2.4930

**Source: Authors' Computation (2023).**

Table 1 showed the summary of the descriptive statistics of all the variables of concern in the study. The dependent variable is PROF (profitability) while the independent variables were firm size (FZ), Liquidity (LIQ) and leverage (LEV). As observed in Table 1, PROF recorded a mean and standard deviation of 0.8611 and 0.3380 while FZ, LEV and LIQ recorded means of 0.2388, 0.5588 and 0.5508 respectively with standard deviation values of 0.4783, 0.1838 and 0.7839 respectively. The low standard deviation recorded by firm attributes suggests that size of firm, liquidity and leverage of the sampled companies are closely around their respective averages. Also, the skewness value showed that all the variables are skewed towards one direction as shown in the positive signs attached to the values while kurtosis values which were close to 3 suggest that the dataset are normally distributed.

## 4.2 Correlation Matrix

**Table 2: Correlation Matrix**

Statistics	PROF	FZ	LEV	LIQ
PROF	1.0000			
FZ	0.0162	1.0000		
LEV	0.0138	0.3849	1.0000	
LIQ	0.0004	0.1363	0.0078	1.000

**Source: Authors' Computation (2023).**

As presented in Table 2, the correlation coefficients among the dependent variable were positive. The relationship among the dependent and independent variables revealed that a unit rise in firm attributes would result to a positive rise in the level of profitability. The Pearson correlation (Pearson *R*) between pairs of independent variables did not show signs or existence of multicollinearity as the correlation coefficients ranged were less than 0.8.

**Table 3: Variance Inflator Factor Results**

Variable	FZ	LEV	LIQ	Mean VIF
VIF	1.18	1.18	1.04	
1/VIF	0.8450	0.8500	0.9630	1.13

**Source: Authors' Computation (2023).**

From Table 3, the aggregate mean VIF for the independent variables is 1.13, which indicates that multicollinearity does not exist among the pairs of the independent variables of the study, thus confirming the fitness of the model of the study.

**Table 4: Result for Breusch-Pagan/Cook Weisberg Test**

Breusch Pagan Cooke/Weisberg Test for Heteroskedasticity	Chi2(1) = 15.79; Prob>chi2(1)= 0.000
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**Source: Authors' Computation (2023).**

As shown in Table 4, the chi (1) of the fitted value for the variables is 15.79 with a probability value of 0.0000; this result suggests the presence of non-equal variance in the sample since the p-value is significant.

## 4.5 Firm Attributes and Profitability

**Table 5: Results of Model Size (FZ) and Profitability (PROF)**

Variables	Symbol	Coefficient	Std. Err	t-Statistics	Sign.
Constant	_CONS	0.792	0.390	12.03	0.000
Firm Size	FZ	0.011	0.064	9.12	0.000
F(1, 128(p-value)				22.03 (0.000)	
R-Squared				0.389	
R-Squared Adj.				0.377	

**Source: Authors' Computation (2023).**

Table 5 showed that FZ obtained positive coefficients of about 0.011, suggesting that FZ have positive relationship with PROF. Additionally, FZ obtained a t-stat. of 9.12 ( $P > |t| = 0.000$ ), which implies that on an individual basis, firm size has a positive substantial relationship with the level of profitability of publicly quoted non-finance companies in Nigeria. Additionally, the result showed that R-squared obtained is 0.389 and the Adjusted

R-squared obtained is 0.377, which implies that FZ caused 38.9% changes in the level of profitability. We therefore conclude that firm size has substantial impact on the level of profitability of the publicly quoted non-finance companies.

**Table 6: Results of Model II for Leverage (LEV) and Profitability (PROF)**

Variables	Symbol	Coefficient	Std. Err	t-Statistics	Sign.
Constant	_CONS	0.923	0.079	19.05	0.000
Leverage	LEV	0.014	0.017	8.84	0.000
F(1, 128)				12.67	
(p-value)				(0.000)	
R-Squared				0.5200	
R-Squared Adj.		-		0.5100	

**Source: Authors' Computation (2023).**

Table 6 showed that LEV obtained positive coefficients of about 0.014, suggesting that LEV have positive relationship with PROF. Additionally, LEV obtained a t-stat. of 8.84 ( $P > |t| = 0.000$ ), which implies that on an individual basis, leverage has a positive substantial association with the level of profitability of publicly quoted non-finance companies in Nigeria. Additionally, the result showed that R-squared obtained is 0.5200 and the Adjusted R-squared obtained is 0.5100, which implies that LEV caused 52% changes in the level of profitability. We therefore conclude that leverage has substantial impact on the level of profitability of the publicly quoted non-finance companies.

**Table 7: Results of Model III for Liquidity (LIQ) and Profitability (PROF)**

Variables	Symbol	Coefficient	Std. Err	t-Statistics	Sign.
Constant	_CONS	0.900	0.222	14.05	0.000
Liquidity	LIQ	0.008	0.004	8.18	0.000
F(1, 128)				19.03	
(p-value)				(0.000)	
R-Squared				0.828	
R-Squared Adj.				0.819	

**Source: Authors' Computation (2023).**

Table 7 showed that LEV obtained positive coefficients of about 0.004, suggesting that LIQ have positive relationship with PROF. Additionally, LIQ obtained a t-stat. of 8.18 ( $P > |t| = 0.000$ ), which implies that on an individual basis, liquidity has a positive substantial association with the level of profitability of publicly quoted non-finance companies in Nigeria. Additionally, the result indicated that R-squared obtained is 0.828 and the Adjusted R-squared obtained is 0.819, which implies that LIQ caused 82.8% changes in the level of profitability. We therefore conclude that liquidity has significant effect on the level of profitability of the publicly quoted non-finance companies. This finding is however in consonance with those of Daniel and Tilahun (2012); Abdullahi (2019); Malik (2020).

## 5. Conclusion and Recommendations

This study highlights the importance of choosing methods of measuring firm attributes (firm size, liquidity and leverage) as they affect the profitability of publicly quoted non-financial corporations in Nigeria from 2012-2022. The study concluded that firm attributes significantly and positively impact the level of profitability of corporations. Based on the empirical evidence, it is strongly advised that management of publicly traded non-

financial enterprises should prioritise the exploration of strategies aimed at enhancing and attaining the utmost efficiency in assets (return on assets) utilisation while concurrently maximising the utilisation of resources throughout the production and distribution phases of finished goods. Such a course of action would undoubtedly contribute to the amelioration of their profitability metrics. Furthermore, it is imperative for both the management and shareholders to exercise prudence in their decision-making processes pertaining to the extent of financial leverage; this can be achieved by prioritising equity over debt, thereby mitigating the risks associated with excessive leverage and the subsequent adverse impact on profitability resulting from heightened interest obligations to debt holders.

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