

THE EFFECT OF ASSET MIX ON FINANCIAL PERFORMANCE OF INDUSTRIAL GOODS FIRMS IN NIGERIA: AN ENTREPRENEURIAL FINANCE PERSPECTIVE

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Abstract

This study investigated the impact of asset mix over a ten-year period (2013–2022) on the financial performance of Nigerian listed industrial goods companies. Return on Assets (ROA) was used to gauge financial performance, and Current Asset Ratio (CART), Non-Current Asset Ratio (NCART), Intangible Asset Ratio (INTART), and Investments Asset Ratio (INVART) were used as proxies for asset mix. Ten purposefully chosen industrial companies listed on the Nigerian Exchange Group provided secondary data from their published annual reports and accounts, and an ex post facto research design was used. The study used multiple regression analysis utilizing the Ordinary Least Squares (OLS) method with E-Views 9.0, panel unit root tests, diagnostic tests, and descriptive statistics. The results showed that whereas CART had a negative and statistically negligible impact on ROA, NCART, INTART, and INVART had a positive and statistically significant effect. The asset mix factors collectively explained almost 15% of the variability in the financial performance of the selected enterprises, according to the coefficient of determination. The study concludes that the asset mix has a major impact on the financial performance of Nigerian traded industrial goods companies. As a result, the study recommends that businesses should keep their asset composition an optimal balance, focusing on investment, intangible, and productive non-current assets while avoiding excessive liquidity that could result in idle resources. By presenting actual data from Nigeria's industrial sector, the study adds to the body of literature already in existence and provides useful information on efficient asset allocation techniques for investors, corporate managers, and policymakers.

Keywords: Asset Mix, Financial Performance, Entrepreneurial Finance, Return on Assets (ROA), Current Asset Ratio (CART), Non-Current Asset Ratio (NCART), Intangible Asset Ratio (INTART), Investment Asset Ratio (INVERT)

INTRODUCTION

Every organization needs resources, both material and human, to survive. An organization's resources are its assets. Since it guarantees the company's ability to continue operating, effective management of these resources is crucial to its success (Nangih & Emeka-Nwokeji, 2021). Temuhale and Ighoroje (2021) define assets as resources within an organization's control that have their roots in past occurrences. In their most basic form, these resources are just assets that the business owns and can use to generate revenue or boost shareholder wealth. They are meant to offer financial benefits to the organization in the future.

These resources may be material, immaterial, or deteriorating. They can also be classified as current or non-current assets (Yinusa, Adelopo, Rodionova, Samuel, 2019). The relative amounts of the various asset categories that a business uses to finance its operations and turn a profit are shown in the asset mix or structure. Additionally, it explains how the organization's assets are categorized or structured (Ukhriyawati, Ratnawati & Riyadi, 2017). The allocation of assets is a crucial part of any successful financial plan, according to Setiadharm and Machali (2017). The three primary categories are producing assets, squandering assets, and turnover assets. According to Okpara & Ifurueze (2020), a company's asset mix is the arrangement of its assets, specifically its tangible non-current assets, intangible non-current assets, and current assets.

Similarly, Schmidt (2014) divided assets into four categories: current, intangible, long-term investments, tangible non-current, and others. On the other hand, for most organizations, particularly those in the private sector, performance is the final indicator of success (Reyhani, 2015). This shows how well the company uses its resources to achieve its goals. Nonperformance may be the cause of the organization's leadership's failure (Olatunji & Tajudeen, 2016). A corporation can be assessed using both financial and non-financial characteristics. While the latter entails assessing the company using qualitative factors like customer count, market share, and product quality, the former can be ascertained by examining financial indicators or ratios like profitability, liquidity, market, and efficiency (Okpara & Ifurueze, 2020). According to Okpara and Ifurueze (2020), the linkages between items in the income statement and the statement of financial position provide insight into a company's financial strengths and shortcomings. According to Obara, Ohaka, and Odinakachukwu (2017), decision makers can evaluate the financial performance of the organization to determine how effective its operations and strategy are. However, the focus of this study is on organizations' financial performance. The connection between asset mix and financial performance has generated a lot of discussion among academics lately. In short, a company's asset mix or structure is important since it affects the interests of its stakeholders and dictates the company's financial performance and position.

Therefore, financial managers are constantly working to achieve the ideal asset mix in their organizations in order to successfully balance the risks associated with performing and idle assets (Nwokeji & Agubata, 2019). The stock market has been vital to Nigeria's economic development, which has seen tremendous expansion and change in recent decades. The management of assets becomes a crucial component of financial strategy as companies aim for sustainability and competitiveness. A company's overall financial performance can be significantly impacted by the makeup of its asset mix, particularly how resources are distributed among different kinds of assets (Nangih, Obuah & Kumah, 2020). The combination of several asset classes, including cash, equities, bonds, and real estate, that a business has in its portfolio is referred to as its asset mix.

Risk tolerance, market conditions, and strategic objectives are just a few of the many variables that must be carefully taken into account when deciding how to divide resources across these asset

types. Investors, legislators, and corporate executives must comprehend the connection between asset mix and financial performance in the context of Nigerian listed companies (Nangih & Onuora, 2020). Both local and international variables have an impact on Nigeria's dynamic financial market. Changes in the market, economic reforms, and regulations can all have an impact on how businesses manage their assets and, in turn, their financial success. In order to give stakeholders in the financial ecosystem useful information, a thorough examination of the impact of asset mix on the financial performance of listed companies in Nigeria is necessary.

Statement of the Problem and the justification for this study

Without resources, both material and human, organizations cannot function. A company's ability to continue operating depends on how well these resources, or assets, are managed. These resources are a crucial component of successful businesses. Many studies on various aspects of assets have been conducted in both developed and emerging economies due to the significance of assets in creating value for businesses. As a result, research on the relationship between a company's assets and financial success already existed. However, the majority of empirical research on the topic produced inconsistent findings. Furthermore, their approaches differed. Once more, none of the earlier research had particularly examined Nigeria's non-financial sector.

The dynamic nature of the Nigerian financial sector is a result of various variables, including global market trends, regulatory changes, and economic reforms. The success of a company's asset mix strategy and, in turn, its financial performance can be greatly impacted by these external factors. To find out how Nigeria's dynamic financial environment affects asset portfolio composition, more research is needed. Nigerian businesses must deal with uncertainties brought on by shifting regulations, geopolitical events, and market swings. A thorough grasp of the processes at work is hampered by the lack of hard empirical data.

Given these problems, this study attempts to close the current knowledge gap by doing an empirical and methodical analysis of the impact of asset mix on the financial performance of Nigerian listed companies. In addition to adding to the body of knowledge, the results will help stakeholders and corporate decision-makers navigate the complexities of the Nigerian financial system.

The main objective of this study is to ascertain the effect of asset mix on financial performance of industrial goods firms in Nigeria.

Literature Review

The Concept of Asset Mix and its Dimensions

A key idea in portfolio management is asset mix, commonly referred to as asset allocation, which is carefully allocating investments across various asset classes in order to strike a balance between risk and return (Nassar, 2016). Building a diverse portfolio that fits an investor's financial goals, risk tolerance, and time horizon is the aim of asset mix. Investors seek to maximize the performance of their portfolio while reducing the impact of volatility in any one investment by diversifying across multiple asset classes (Nangih & Onuora, 2020). Depending on the aim of the research, different researchers have defined the assets mix using different aspects. The distribution of your investments among several categories, such as stocks, bonds, and cash, to balance risk and growth is known as an asset mix, or asset allocation. It is the cornerstone of portfolio management, influencing both the volatility and long-term returns of your portfolio (Chukwuka et al 2026).

Myersse (2017) states that asset structure is merely a combination of the several asset components, which were determined to be fixed assets, intangible fixed assets, and current assets, which include cash on hand and cash in the bank. Mwaniki and Omagwa (2017), on the other hand, looked into

the assets structure and defined it as the ratios of the company's current and fixed assets to its total assets, respectively. Typically, businesses classify their assets according to their type and intended usage. Decision-making, management, and financial reporting are all aided by the classification. These are typical types of business assets:

Current Assets: assets that are anticipated to be spent within a year or turned into cash. Cash, inventories, short-term investments, accounts receivable, and pre-paid expenses are a few examples (Akingunola, Olawale & Olaniyan, 2017).

Fixed Assets (Non-Current Assets): Long-term assets utilized in the production of goods and services that have a useful life longer than a year. Examples include automobiles, machinery, property, plant, and equipment, as well as intangible assets like copyrights and patents (Aljamaan, 2018).

Intangible Assets: non-physical assets that are valuable because of legal or intellectual rights but are not physically present. Intellectual property, goodwill, patents, trademarks, copyrights, and brand value (Catarina & Pitau, 2018).

Tangible assets: This is tangible assets that have a limited duration and a quantifiable worth. Examples include buildings, machinery, cars, land, and equipment (Chukwu, Ohaka, & Nwanyanwu, 2017).

Financial Assets: A claim on the company's financial standing. Stocks, bonds, derivatives, and other securities are a few examples (El-Chaarani & El-Abiad, 2019).

Investment Assets: Assets purchased not for daily operations but with the goal of earning a profit. Examples include long-term investments in real estate, mutual funds, equities, and bonds (Emeka-Nwokeji & Agubata, 2019). Businesses and stakeholders can use these categories to assess a company's asset composition, comprehend its financial situation, and make well-informed decisions about investment, risk management, and resource allocation.

Financial Performance

The phrase "financial performance" refers to a company's capacity to generate profits, efficiently manage its resources, and help build wealth for its shareholders.(Agubata & Emeka-Nwokeji, 2019) A variety of financial accounts, key performance indicators (KPIs), and other financial metrics are examined in order to assess a company's efficacy, profitability, and general health. Financial performance is crucial to stakeholders, including creditors, investors, management, and regulatory agencies, because it provides information about the organization's operational effectiveness and long-term viability. (Agubata & Emeka-Nwokeji, 2019). A company's general health or the availability and growth of more funds over time can also be characterized as financial performance. Financial performance is a common indicator used by financial analysts to analyze the success of several businesses, whether or not they are in the same industry. This is an essential tool for making wise financial decisions. In conclusion, Yahaya and Lamidi (2015), referenced in Okonkwo, Adigwe, Ezu, and Oko (2020), state that financial success is a crucial objective that businesses, especially profit-oriented firms, want or work for. Based on the aforementioned, two accounting metrics, Return on Equity (ROE) and Return on Asset (ROA) were selected; however, this study opted for ROA.

Theoretical Review

This paper is anchored on Signaling theory based on its relevance to this paper.

Signaling Theory

The signaling theory serves as the foundation for this work. According to the signaling hypothesis, one party can legitimately communicate certain information about itself to another. By adding fixed assets that may be used as security, the company will send a positive signal to investors and make it easier for it to get finance should the need arise. The allocation of funds in each component of assets is always indicated by the asset structure. This is crucial because it affects not just the real money required for the company's long-term plan but also how investors view the company in the near future. By acquiring fixed assets that might be used as security for more debt should the need arise, the company will convey a positive signal to investors (signaling theory). Due to the lower risk of investments and transactions involving assets, which are readily disposable on the market, businesses with higher collateral value of assets (asset structure) have more access to bank loans than businesses dominated by intangible assets (Emeka-Nwokeji & Agubata, 2019). This study adopts this viewpoint and assumes that these assets are pledged as collateral, allowing the company with a high degree of intangible assets to readily access borrowing without being compelled by circumstances to issue shares.

According to a study by Hossain, Khan, and Khalid (2019), asset structure and firm performance are positively correlated. In a different argument, they claimed that fixed assets often have a larger liquidation value than intangible assets, suggesting that investors are less at risk when a company files for bankruptcy. According to a similar statement, a firm's capacity to provide larger collateral will be determined by the size of its tangible assets. As a result, asset mix and structure have an impact on company value.

Empirical Review

Nangih and Emeka-Nwokeji (2021) evaluated how the asset mix affected the financial performance of several Nigerian consumer products companies. Determining the impact of current and intangible asset structures, returns on assets, and tangible non-current assets were the study's specific goals. Data was gathered from the companies' annual reports over a seven-year period, from 2013 to 2019, using an ex post facto research design. The data was analyzed using the multiple regression analytical technique. The study's results showed that roughly 13.7% of the differences in returns on assets could be explained by the independent variables used in the investigation. In particular, ROA at the 5% level of importance is positively and significantly impacted by both current and intangible assets.

The impact of noncurrent assets on ROA is favorable but negligible. Therefore, although though it only accounts for around 14% of a company's performance, its asset mix has a significant impact on its financial performance. As a result, it was advised that companies boost their current and intangible assets while maintaining them at an ideal level to guarantee the fulfillment of maturing short-term business responsibilities.

Temuhale and Ighoroje (2021) investigated at how capital structure and asset structure affected the performance of Nigerian listed industrial goods companies between 2011 and 2019. The study was divided into two models: the asset structure model used property, plant, and equipment (PPE), other fixed assets (OFA), and current assets (CAS) as explanatory variables; the capital structure model used long-term debt to total equity (LTDTEQ), long-term debt to total asset (LTDITAS), and long-term debt to long-term capital (ITDTLC) as explanatory variables; and each model used return on asset (ROA) to represent performance. The companies' yearly financial condition and profit and loss statements served as the source of the data. Panel data, correlational analysis, and descriptive statistics were used in the study.

The return on assets of Nigerian industrial goods firms was found to be positively but insignificantly impacted by all asset structure variables, but positively and significantly impacted by capital structure variables, such as the ratio of long-term debt to total equity, the ratio of long-term debt to total assets, and the ratio of long-term debt to total long-term capital. Therefore, the study came to the conclusion that capital structure has a beneficial impact on industrial products firms' performance, while asset structure has no discernible influence. The study recommended the companies to refrain from making excessive investments in fixed assets and to think about taking on additional long-term debt to fund their operations.

Nangih and Onuora (2020) investigated how capital intensity affected the performance of Nigerian listed oil and gas companies. Property, plant and equipment, intangible non-current assets, non-current prepayments, and investment property were the dimensions of the independent variable in the study, while the dependent variable was measured by the profit margin. For five years (2014 to 2018), data was collected from nine (9) publicly traded oil and gas firms. All of the predictor factors had a substantial positive impact on the profit margin, with the exception of intangible non-current assets, according to the results of the random effect regression model used to test the hypotheses. According to the study's findings, oil and gas firms with more capital intensity were probably going to be more successful than those with lower intensity.

Mwaniki and Omagwa (2017) looked into the relationship between performance and asset structure for companies listed on the Nairobi Stock Exchange under the commercial and service sectors. As dimensions of the independent variable, the study included property, plants, and equipment, current assets, intangible assets, and long-term investments. Multipler regression analysis was used to examine secondary data gathered from the annual reports from 2010 to 2014. The findings showed that while current assets and intangible assets had no statistically significant impact on business financial performance, property, plants and equipment, and long-term investments had a statistically significant and favorable influence. According to the study's findings, companies should boost their long-term investments and PPE to boost profitability.

Olatunji and Tajudeen (2016) evaluated how investments in non-current assets affected the profitability of a few Nigerian listed banks. Financial statements covering the years 2000–2012 provided the data. The dependent variable was measured by net profit, whereas the independent variables were represented by buildings, land, leasehold properties, fixtures and fittings, and computer investment. The results showed that the factors had a strong association. It was determined that fixed asset investments had a significant and favorable statistical impact on Nigeria's banking industry's profitability. Based on different sectors, empirical research on asset mix investment has shown inconsistent results.

Reyhani (2015) investigated how the assets structure affected the performance of a few Tehran Stock Exchange companies. EBIT served as a stand-in for the dependent variable in the study, which conceived assets structure (the independent variable) as fixed assets and variable assets. The study's conclusions showed that fixed assets significantly increase EBIT.

RESEARCH METHODOLOGY

The study design that was employed was Ex-Post Facto. This kind of research design is used after the fact or event has already happened. The study's population consists of more than 287 companies that are listed on the Nigeria Exchange Group. The study's sample size consists of ten companies: Academy Press Plc, Berger Paints Plc, Lafarge Cement Plc, Portland Paints and Product Plc, DN Meyer Plc, Austin Laz and Co Plc, Dangote Cement Plc, Beta Glass Plc, Cap Plc, and Aluminum

Extrusion Industries. The study used the judgmental sampling technique because the researcher purposefully selected a sample of 10 companies from the 287 companies listed on the Nigeria Exchange Group based on the availability of the companies' annual reports and accounts from 2013 to 2022. For this investigation, secondary sources of data were utilized. The asset mix (Current Asset Ratio (CART), Non-Current Asset Ratio (NCART), Intangible Asset Ratio (INTART), and Investments Asset Ratio (INVART)) and financial performance (proxied with Return on Assets (ROA)) of the listed manufacturing firms on the Nigeria Exchange Group were measured using data from the annual reports and accounts of ten companies.

The statistical method of data analysis was used, along with descriptive statistics and a correlation matrix. Multiple regression analysis utilizing the ordinary least square (OLS) approach was selected in light of the study hypothesis. The data was analyzed using E-VIEW 9.0 statistical software to determine the type of relationship that exists between the independent factors and the dependent variable used, which will be the foundation for evaluating the study's hypotheses. According to the model, asset mix variables such as the Current Asset Ratio (CART), Non-Current Asset Ratio (NCART), Intangible Asset Ratio (INTART), and Investments Asset Ratio (INVART) have a considerable impact on financial performance (proxied by Return on Assets (ROA)).

The formulated model is as follows:

$$ROA=f(CART,NCART,INTART,INVART)$$

$$ROA=\beta_0+\beta_1LogCART+\beta_2LogNCART+\beta_3LogINTART+\beta_4LogINVART+E$$

Where;

ROA=Return on Assets,

CART=Current Asset Ratio,

NCART= Non-Current Asset Ratio,

INTART=Intangible Asset Ratio,

INVART= Investments Asset Ratio,

E=Error Term.

β_0 =Intercept

β_1 - β_4 =Coefficient of the Independent Variables.

The a priori expectation is $\beta_1, \beta_2, \beta_3, \beta_4$ is lesser or greater than 0.

RESULTS AND DISCUSSION

The descriptive statistics of comprises of the minimum, maximum, mean and standard deviation values.

Table 4.1: Descriptive Statistics

	LOGROA	LOGCART	LOGNCART	LOGINTART	LOGINVART
Mean	0.857503	0.034803	0.176944	1.472629	0.482521
Median	0.933427	0.043231	0.200736	1.594916	0.655600
Maximum	1.653387	1.511720	1.394941	2.161600	2.024118
Minimum	1.303466	1.005086	0.719509	0.787282	1.547677
Std. Dev.	0.461761	0.213135	0.241998	0.474644	0.526596
Skewness	-1.339754	0.964751	0.219508	-2.087178	-2.252132
Kurtosis	6.751438	7.562682	2.794856	9.123663	7.415823
Jarque-Bera	85.01218	102.2544	0.968630	226.5636	165.7829
Probability	0.000000	0.000000	0.016119	0.000000	0.000000
Sum	82.32034	3.480268	17.51741	145.7903	48.25208
Sum Sq-Dev	20.25618	4.497225	5.739158	22.07813	27.45301

Observation	100	100	100	100	100
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Source: E-VIEW Version 9.0 Output, 2025

The descriptive data for the CART, NCART, INTART, INVART, and ROA are displayed in Table 4.1. Table 4.1 shows that CART has a mean of 0.0346, a standard deviation of 0.2131, a maximum of 1.5117, and a minimum of 1.0051. NCART has a mean of 0.1769, a standard deviation of 0.2420, a maximum of 1.3949, and a minimum of 0.7195. This suggests that NCART's standard deviation of 0.2420 indicates a volatility of 24.20%. INTART has a mean of 1.4726, a standard deviation of 0.4746, a minimum value of 0.7873, and a maximum value of 2.1616. With a mean value of 1.4726, it is implied that growth is quick because the mean value exceeds the standard deviation. INVART has a mean value of 0.4825, a standard deviation of 0.5266, a maximum value of 2.0241, and a minimum value of 1.5477. With a mean value of 0.4825, it suggests that INVART is slow because it is less than the Std. Dev. ROA, which gauges the firm's investment performance and displays the net income as a percentage of its assets. The ROA has a minimum of 1.3035, a maximum of 1.6534, an average of 0.8575, and a standard deviation of 0.4618. The fact that the mean value exceeds the standard deviation value suggests that the firms' ROA has significantly increased during the course of the study.

Panel Unit Root TEST

The purpose of this test is to determine whether or not the data series are stationary. It is crucial to remember that if a set of data is not stationary, the outcome would be ludicrous and so undesirable. A panel unit root test employing the Levin, Lin & Chu Test, Im Pesaran and ShinW-Test, Augmented Dicker-Fuller's Test, and PP Fisher Test is the most effective method for determining if a collection of panel data is stationary. Table 4.2a following shows the summary of the outcome; INTART, INVART, CART, and NCART

Table 4.2a: Group panel unit root test: Summary Series: LOGROA C LOGCART, LOGNCART, LOGINTART, LOGINVART Date: 09/09/24 Time: 17:04

Sample: 1 100

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 1

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistics	Prob.* *	Cross Section s	Obs
Null: Unit root (assumes common unit root process)				
Levin. Lin & Chu t*	- 28.0540	0.000 0	5	472
Null: Unit root (assumes individual unit root process)				
Im. Pesaran and Shin W.stat	- 25.7617	0.000 0	5	472
ADF-Fisher Chi-Square	115.434	0.000 0	5	472
PP-Fisher Chi-Square	99.2114	0.000 0	5	474

* Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.
Source: E-Views .09 Output (2024).

The panel unit root test summary for the independent variables (CART, NCART, INTART, INVART) and the dependent variable (ROA) is shown in Table 4.2a. According to the null hypothesis, the data is not stationary. The null hypothesis must be rejected if the findings of the Levin, Lin & Chu Test, Im Pesaran and Shin W-Test, Augmented Dicker-Fuller's Test, and PP Fisher Test reveal probability values that are less than the critical value at any level of significance. As can be seen from Table 4.3a above, all of the Levin, Lin & Chu, Im Pesaran and Shin W-Test, Augmented Dicker-Fuller's Test, and PP Fisher Test probability values are 0.0000 for the variables that are less than the significance level of 0.05. As a result, we reject the null hypothesis, which claims that the panel data series are normally distributed and appropriate for multiple regression and that the data is not stationary.

Table 4.2b: Breusch-Godfrey Serial Correlation LM

F-statistic	12.24320	Prob. F(2.87)	0.1256
Obs*R-Squared	20.64576	Prob. Chi-Squared (2)	0.3245

Source: E-VIEW 9.0 Output, 2024

The residuals of the variables were determined to look for serial correlation before estimating the models. The serial correlation LM test was used to accomplish this. Because the p-values of the f-statistics are insignificant at the 5% level of significance, the serial correlation LM test in Table 4.2b indicates that there is no element of serial correlation in the models.

Table 4.2c: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.324150	Prob. F(4.89)	0.8611
Obs*R-Squared	1.349780	Prob. Chi-Squared (4)	0.8529
Scaled explained SS	3.719366	Prob. Chi-Square (4)	0.4453

Source: E-VIEW 9.0 Output, 2024

Heteroskedasticity is a problem when a variable's variability is uneven across the range of values of a second variable that predicts it. The Breusch-Pagan-Godfrey heteroskedasticity test was used to make sure the model estimation was homoscedastic. Because the p-values of the f-statistics are not significant at the 5% significance level, there is no heteroskedasticity issue in the models.

Table 4.2d: Ramsey RESET Test Equation: UNTITLED

	Value	Df	Probability
t-statistic	1.806060	88	0.0743
F-statistic	3.261854	(1,88)	0.0743
Likelihood ratio	3.421231	1	0.0644

Source: E-VIEW 9.0 Output, 2024

The Ramsey Reset specification test was run and the results were reported to make sure the models were properly specified. It was clear that the models were well-specified from the Ramsey Reset specification outcome. At the 5% significance level, the p-values of the f-statistics for every model are not significant.

Table 4.3: Regression Result
Dependent Variable: LOGROA
Method: Least Squares
Date: 09/11/24 Time: 17:06

Sample:1100

Included observations: 100

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	1.392269	0.205436	6.777129	0.000
LOGCART	-0.955936	0.700949	-1.363776	0.1761
LOGNCART	1.363770	0.493710	2.762288	0.0070
LOGINTART	0.195761	0.051767	3.781579	0.0009
LOGINVART	0.072974	0.030796	2.369593	0.0096
R-squared	0.154250	Mean dependent var		0.856131
Adjusted R-Squared	0.116238	S.D. dependent var		0.465662
S.E. of regression	0.437763	Akaike info criterion		1.237445
Sum of squared resid	17.05562	Schwartz criterion		1.372726
Log likelihood	-53.15990	Hannan-Quinn crite		1.292089
F-statistic	4.058002	Durbin-Watson stat		1.981182
Prob(F-statistic)	0.004549			

Source: E-VIEW Version 9.0 Output, 2024

Discussion of Findings

The findings of this study are hereby discussed and supported with relevant literatures thus;

The relevance of CART to ROA is indicated by the t-ratio value of -1.3638 and the p-value of 0.1761, which is greater than the default threshold of 0.05. CART has a negative trend with ROA, as seen by its coefficient of -0.9559. A 1% change in the CART p-value would result in a 95.59% drop in ROA. The ROA of Nigerian listed industrial companies is not significantly impacted by CART. In contrast to the findings of Nangih and Emeka-Nwokeji (2021) and Nangih and Onuora (2020), this is consistent with Temuhale and Ighoroje (2021). The degree of importance to which NCART influences ROA is indicated by the p-value of 0.0070, which is less than the significance threshold of 0.05.

NCART has a positive trend with ROA, as seen by its coefficient of 1.3638. A 1% rise in NCART would result in a 136.38% increase in ROA. The ROA of Nigerian listed industrial products companies is significantly impacted by NCART. This is consistent with the findings of Nangih and Onuora (2020) but at odds with those of Nangih and Emeka-Nwokeji (2021). The degree to which INTART influences ROA is indicated by the t-ratio value of 3.7816 and the p-value of 0.0009, which is less than the predetermined threshold of 0.05. INTART has a considerable positive impact on ROA, as seen by its coefficient of 0.1958. ROA would grow by 19.58% for every percent (1%) change in INTART.

INTART has a significant influence on ROA of listed industrial goods firms in Nigeria. This is consistent with the findings of Nangih and Onuora (2020) but at odds with those of Nangih and Emeka-Nwokeji (2021).

The t-ratio value is 2.3696, indicating the degree of significance between INVART and ROA, and the p-value of INVART is 0.0096, which is less than the predetermined value of 0.05. INVART has a positive trend with ROA, as seen by its coefficient of 0.0730. A 1% change in INVART would result in a 7.30% rise in ROA. The ROA of Nigerian listed food and beverage companies is significantly impacted by INVART. This contradicts the findings of Nangih and Emeka-Nwokeji (2021), but it is consistent with Nangih and Onuora (2020).

The independent variables [CART, NCART, INTART, and INVART] account for 15% of the variation in the dependent variable, ROA, according to the co-efficient of determination (R²) of 15% (0.1543).

Additionally, all of the independent variables—CART, NCART, INTART, and INVART—jointly influenced the dependent variable, ROA of industrial products companies listed in the Nigerian Exchange Group, according to the F-Statistics with a value of 4.0580 and a P-value of 0.0045.

CONCLUSION

The study examined the connection between the asset mix and the financial performance of Nigerian quoted industrial companies during a ten-year period, from 2013 to 2022. The study's specific objectives are to analyze the asset mix metrics [Current Asset Ratio (CART), Non-Current Asset Ratio (NCART), Intangible Asset Ratio (INTART), and Investments Asset Ratio (INVART)] in connection to financial performance as measured by return on asset (ROA). The results showed that return on asset is positively and significantly impacted by Non-Current Asset Ratio (NCART), Intangible Asset Ratio (INTART), and Investments Asset Ratio (INVART), but not by Current Asset Ratio (CART). The study found that the financial performance of Nigerian industrial enterprises that are publicly traded is significantly impacted by the asset mix.

RECOMMENDATIONS

The study therefore, recommends that;

1. Businesses should increase their current and intangible assets, but they should do so at a level that will guarantee the fulfillment of their short-term business obligations while avoiding holding onto surplus cash. This is due to the fact that their financial performance will rise proportionately as a result of these investments. Therefore, it is best to avoid having too much liquidity.
2. The management of Nigerian listed companies should make sure that each asset's quality is taken into account in order to positively contribute to the company's productivity and increase its overall profitability.
3. Since non-current assets might not have a significant impact on financial performance, the management of consumer goods firms should carefully consider the amounts of their investments.
4. Despite the results, the study recommended that further research be done, particularly on asset mix and company performance, taking into account additional performance metrics including Return on Equity (ROE) and Tobin's Q. This will help address the issue of the dearth of research in this field.

REFERENCES

- Akingunola, R. O., Olawale, L. S., & Olaniyan, J. D. (2017). Capital Structure Decision and Firm Performance: *Evidence from Non-Financial Firms in Nigeria. Economica*, 13(6), 351-364.
- Aljamaan, B. E. (2018). Capital structure: definitions, determinants, theories and link with performance literature review. *European Journal of Accounting, Auditing and Finance Research*, 6(2), 49-72.
- Catarina, F. & Pitau, F. (2018). The impact of intangibles on the performance of the major technological companies in the world.
- Chukwuka EJ, Peter A, Efurueze PC, Okolobi AN, Christian I. (2026). The Strategic Role of Financial Record keeping in the Development of Small and Medium Scale Enterprises in

Nigeria. International Research Journal of Multidisciplinary Scope. 7(1):287-306. DOI:
<https://doi.org/10.47857/irjms.2026.v07i01.06698>

- Moemeka, C.D., Chukwuka, E.J. (2026). Effective Science Education for Technological Transformation and Entrepreneurial Digitization of Nigeria. International Journal of Multidisciplinary and Innovative Research 3(3), 168-179.
<https://doi.org/10.58806/ijmir.2026.v3i3n03>
- Okoduwa, C.A., Chukwuka, E.J., Ugbah, A. A., Ifurueze, P.C., & Agbele, G., (2026). Impact of Crowdfunding as an Innovative Entrepreneurial Finance on Nigerian Small and Medium-Sized Businesses' Funding Gaps, International Journal of Multidisciplinary and Innovative Research, 3(2), 100-110. <https://doi.org/10.58806/ijmir.2026.v3i2n01>
- Chukwuka, E. J., & Moemeke, C. D. (2026). The Strategic Effect of Entrepreneurial Education on Nigerian Economic Development. International Journal for Social Studies, 12(2), 48–59.
<https://doi.org/10.26643/ijss/9>
- Chukwuka, E. J., & Moemeke, C. D. (2026). The Application of Innovative Technologies in Science Teaching and Learning on the Academic Performance of Entrepreneurship Students. Journal for Studies in Management and Planning, 12(1), 138–154.
<https://doi.org/10.26643/jsmap/13>
- Chukwuka, E.J & Nwaka, R.N. (2026). The Nexus of Creative Destruction in Entrepreneurship and Nigeria's Economic Development. Jalingo Journal of Social and Management Sciences, 7(1), 245-264.
- Chukwuka, E.J, Nwaka, R.N., Idoye C., Azimi, S. A (2026). Effective Internal Control System as a Measure against Business Failures in Asaba, Delta State, Nigeria. International Journal of Advanced Research in Multidisciplinary Studies (Ijarms), 5(2), 569-580. 20)
- Chukwuka, E.J., Igweh, F.N., Nwaka, R.N.(2026). Assessing the Contribution of Small and Medium-Scale Enterprises to Economic Development In Nigeria. International Journal of Development and Management Review, 21(1) 191-216
- Chukwuka, E.J., Egbule, S. A. (2026). Ethnic Conflict and the Resilience of Small and Medium Enterprises (SMEs) in Nigeria. Nigerian Journal of Management Studies, 28(2) 97-130.
- Chukwuka, E. J., & Amahi , F. U. (2026). Assessing how AI-driven chatbots impact customer experience and satisfaction in Nigerian commercial banks. *African Journal of Social Issues*, 9(1), 1466–1484. <https://doi.org/10.4314/ajosi.v9i1.74>
- Igweh, F.N., Chukwuka, E.J., Uzoma, V.I. (2025). The Role of Social Networks and Support Systems in promoting entrepreneurial Success in Hospitality Sector in Delta State. Nigerian Journal of Rural Finance and Entrepreneurship, 3(3) 104-134
- Chukwu, N. A., Ohaka, J. & Nwanyanwu, L. A. (2017). Intangible assets and market value of quoted money deposit banks in Nigeria. *Unipor Journal of Business, Accounting and Finance Management*,8(1)184-199.

- El-Chaarani, H. & El-Abiad, z. (2019). Analysis of capital structure and performance of banking sector in Middle East countries. *International Journal of Economics and Financial Issues*, 9(2), 1-11.
- Emeka Nwokeji, N. & Agubata, S. A. (2019). Board attributes and corporate performance: Evidence from nonfinancial firms in Nigeria. *The Asian Institute of Research Journal of Economics and Business*, 2(2), 205-217.
- Gbenoba Esther Uche, Chukwuka, Ernest Jebolise (Ph.D), Nwaka Rita Nneka, & Idoye Christian. (2026). Assets and Liabilities Derivatives on Financial Performance of Deposit Money Banks in Nigeria: An Entrepreneurial Perspective. *International Journal of Multidisciplinary and Innovative Research*, 03(07), 545–555. <https://doi.org/10.5281/zenodo.21259546>
- Hossain, A., Khan, A. A., & Khalid, M. S. (2019). An empirical analysis of capital structure and firm's financial performance in a developing country. *Global Journal of Management and Business Research*, 19(3), 8-16.
- Mwaniki, G & Omagwa, J (2017). Asset structure and financial performance: a case of firms quoted under commercial and services sector at the Nairobi securities exchange, Kenya. *Research Journal of Finance and Accounting*, 8(4), 102-110.
- Myersse, B. (2017). Human resource accounting: measuring and creating value in the global market through intellectual capital. *The Nigerian Accountant*, 50.
- Nangih, E. & Emeka-Nwokeji, N. A. (2021). Assets mix and financial performance of listed consumer goods firms in Nigeria. *Journal of Management and Science*, 11(1), 38-46.
- Nangih, E, E. & Onuora, J.K.J. (2020). Capital intensity and firm profitability interconnectedness in Nigeria, *Journal of accounting, business and social sciences*, 3(2), 24-35.
- Nangih, E., Obuah, C. A, & Kumah, L. J. (2020). Current assets management and stock performance of quoted oil and gas firms in Nigeria. *European Journal of Accounting. Finance and Investment*, 6(5), 27-37.
- Nassar, S, (2016), The impact of capital structure on Financial Performance of the firms: Evidence From Borsa Istanbul, *Journal of Business and Financial Affairs*, 5, 173-179.
- Nwokeji, N.E. & Agubata, S.A. (2019). Board attributes and corporate performance: Evidence from nonfinancial firms in Nigeria. *The Asian Institute of Research Journal of Economics and Business*, 2(2) 205-217.
- Obara, L.C., Ohaka, J., Nangih, E. & Odinakachukwu, I. O (2017). The effect of accounting for waste management expenditure on the profitability of oil and gas companies in Nigeria. *International Journal of Economics, Commerce, and Management*, 5(3) 68-81.
- Okpara, U.C. & Ifurueze, M.S. (2020). Effect of financing mix on corporate profitability of selected brewery and beverage industry in Nigeria. *Journal of Accounting, Business and Social Sciences*, 3(1) 31-48.

- Okpara, U.C. & Ifurueze, M. S. (2020). Effect of financing mix on corporate profitability of selected brewery and beverage industry in Nigeria. *Journal of Accounting, Business and Social Sciences*, 3(1)31-48.
- Olatunji, T. E. & Tajudeen, A.A. (2016). Investment in fixed assets and firm profitability: Empirical evidence from the Nigerian Banking Sector. *Asian Journal of Social Sciences and Management Studies*, 1(3) (2014) 78-82.
- Reyhani, A. G. (2015). The investigation of effect of assets structure on performance of accepted companies of Tehran Stock Exchange (TSE).
- Journal of Basic and Applied Scientific Research, 2(2),1086-1090. Setiadharmas, S., & Machali, M. (2017). The effect of asset structure and firm size on firm value with capital structure as intervening variable. *Journal of Business and Financial Affairs*, 6(4), 298-302.
- Chukwuka EJ, Peter A, Efurueze PC, Okolobi AN, Christian I. (2026). The Strategic Role of Financial Record keeping in the Development of Small and Medium Scale Enterprises in Nigeria. *International Research Journal of Multidisciplinary Scope*. 7(1):287-306. DOI: <https://doi.org/10.47857/irjms.2026.v07i01.06698>
- Chukwuka EJ, Moemeke CD, Onyemaechi U, Nneka NR, Ejaita OA, Chukwuka GE and Nkechi AT, 2026. The impact of modern technological innovations on food security in Nigeria: A cutting-edge technology from an agropreneurship perspective. *Agrobiological Records*, 23: 158-172. <https://doi.org/10.47278/journal.abr/2026.014>
- Chukwuka, E. J., & Amahi, F. U. (2026). Assessing the Modern Employee Management Strategies for Optimum Organizational Productivity in Nigeria. *Journal for Studies in Management and Planning*, 12(2), 1–27. <https://doi.org/10.26643/jsmap/7>
- Temuhale, J. & Ighoroje, E. J. (2021). Asset structure, capital structure and performance of quoted industrial goods firms in Nigeria. *Journal of Research in Business and Management*, 9(1), 40-51.
- Ukhriyawati, C. F., Ratnawati, T., & Riyadi, F. (2017). The influence of asset structure, capital structure, risk management and good corporate governance on financial performance and value of the firm through earnings and free cash flow as an intervening variable in banking companies listed in Indonesia stock exchange. *International Journal of Business and Management*, 12(8), 249-260.
- Yinusa, O, G., Adelopo, L, Rodionova, Y., Samuel, O.L. (2019). Capital structure and firm performance in Nigeria. *African Journal of Economic Review*, 7(1), 31-56.