

Business Diversification and Firms Value-Added In Consumer Goods: Assessing Nigerian Business Environment

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ABSTRACT

This study examined the effect of business diversifications on the firms' value added consumer goods in Nigeria. An ex-post facto research design was adopted. The population comprised of 21 listed consumer goods firms on the Nigerian Exchange Group as of December 2024, of which 15 firms have complete data from 2012 to 2024, and were purposively sampled. Secondary data were collected from the firms' annual reports, providing financial information relevant to the study variables. The formulated hypotheses were subjected to panel Generalized Least Squares regression. The findings indicate that: subsidiary diversification has a significant negative effect on value added to sales ratio among listed consumer goods firms in Nigeria, while regional and product diversification has a significant positive effect on value added to sales ratio among listed consumer goods firms in Nigeria. The study recommended that management of listed consumer goods firms should evaluate the strategic necessity and cost-effectiveness of establishing new subsidiaries. Moreover, management of listed consumer goods firms should evaluate the strategic necessity and cost-effectiveness of establishing new subsidiaries while product development and marketing departments within listed consumer goods firms should focus on optimizing and consolidating their product portfolios rather than continuously introducing new products.

Keywords: Business Diversifications, Value Added, Sales Ratio, Consumer Goods, Nigeria

JEL: M10, M14, M31

1. INTRODUCTION

The modern business environment is characterized by rapid globalization, increased competition, and ever-changing consumer demands, all of which have created significant

challenges and opportunities for firms (Orjinta & Anetoh, 2025), especially in rising economies like Nigeria. Within this context, consumer products companies are essential to boosting the economy, generating jobs, and advancing national development. (Babatunde, Okeleke & Ijomah, 2022). These firms produce essential products ranging from food and beverages to household consumables, making them highly visible in the day-to-day lives of citizens and crucial for the stability of the manufacturing sector. However, operating in Nigeria presents unique hurdles, including exchange rate volatility, inflationary pressures, infrastructural deficiencies, and fluctuating regulatory policies (Nwosu, Mairafi, Musa & Kolo, 2025). These realities often compel firms to adopt strategies that can help them remain competitive and resilient in the face of uncertainty.

One such strategy is diversification (Binuyo & Binuyo, 2020), which enables firms to spread risks, access new markets, and sustain profitability in unpredictable environments. In addition, global trends such as technological innovation, shifting consumer preferences, and rising sustainability concerns have pushed firms to continuously seek new ways of creating value (Ibekwe, 2024). It is particularly important for consumer goods firms because their operations often rely heavily on both human capital and resource utilization, making the efficient transformation of inputs into outputs essential for sustainable performance. In this context, the value added to sales ratio has emerged as a useful metric, providing hint into how effectively firms are turning their activities into tangible benefits. Thus, understanding the relationship between business diversification and value added is timely, as it provides practical knowledge on whether diversification is simply a survival strategy or whether it significantly enhances the wealth-creation capacity of firms (Orjinta, Udoezika & Korim, 2024).

This backdrop makes the study of business diversification and its effect on value added particularly important, as it allows for an understanding of how Nigerian consumer goods firms adapt their strategies to thrive amidst turbulence. It also provides an opportunity to evaluate whether diversification truly contributes to measurable value creation or whether it imposes additional burdens that might weaken performance in the long run. These consequences make it important to examine the effect of subsidiary, regional, and product diversification on the value added to sales ratio of listed consumer goods firms in Nigeria.

The gap in the literature lies in the fact that no study has directly examined the effect of business diversification on value added among consumer goods firms in Nigeria. Existing studies (Abdulrauf, Quadri & Ibrahim, 2025; Ezeana, Ezeagba & Ndubuisi, 2024; Ibojo & Owoeye, 2024; Susanto, Adib & Prastiwi, 2024; Muriuki, 2024; Devkota, 2024; Okpoa & Damiana, 2023; Okegbemiro & Adim, 2023; Gunu, 2022; Omaliko & Okpala, 2022) have largely concentrated on the implications of diversification for financial performance, firm value, or sustainability across sectors such as banking, conglomerates, and general manufacturing. These studies often relied on indicators like ROA, ROE, or Tobin's Q, but none incorporated the value added ratio as a measure of performance.

Furthermore, research in this area has not extended to the 2024 accounting year, leaving a clear temporal gap in assessing how subsidiary, regional, and product diversification affect value-added outcomes within the Nigerian consumer goods industry. This however form the

significant reasons and justification for this paper, hence the need to x-ray the effect of business diversification on value added of consumer goods firms in Nigeria.

2. LITERATURE REVIEW

Business Diversification and Value Added

Business diversification refers to the strategic approach through which a firm expands its range of operations beyond its original activities in order to achieve growth, manage risk, or exploit new opportunities (Omaliko & Okpala, 2022). According to Ezeana et al. (2024), it involves a deliberate effort to move into new products, markets, or sectors, allowing the organisation to spread its activities across different areas of economic engagement. Diversification can occur through internal development, partnerships, acquisitions, or mergers, and it reflects a firm's intention to broaden its operational footprint. Value added is the additional worth created by a firm through its production processes, measured as the difference between the value of output and the cost of inputs used in production (Velnampy, 2011, Nwankwo & Kanyangale, 2020). It represents the wealth generated by the organisation that is distributed to employees, shareholders, and other stakeholders in the form of wages, profits, and taxes. Value added captures the firm's contribution to the economy beyond merely selling goods or services, highlighting how resources are transformed into higher-value outputs (Muojekwu, Ochuka & Nworie, 2025). It reflects the effectiveness of a firm in utilizing its resources, including labor, capital, and materials, to generate economic benefits (Acuña-Opazo & González, 2021). Firms with high value added demonstrate an ability to enhance the worth of raw materials, intermediate goods, or services through processes, innovation, and operational efficiency (Velnampy, 2011).

Business diversification has significant implications for value added because it directly influences how firms allocate resources, manage risks, and create opportunities for innovation. In this study, business diversification can take the form of subsidiary diversification, regional diversification and product diversification. When these forms of diversification are effectively managed, they can improve efficiency, stimulate innovation, and enhance the value added to sales ratio by ensuring that firms create more wealth relative to their revenue.

Value Added to Sales Ratio

The value added to sales ratio measures the proportion of a firm's value added relative to its total sales revenue, providing hint into how effectively a company transforms its sales into economic worth (Singh & Saxena, 2017). It reflects the efficiency of the firm in converting revenue into wealth that benefits employees, shareholders, and other stakeholders. This ratio emphasizes the quality of sales, showing how much of the revenue is actually contributing to value creation rather than merely covering costs. A higher value added to sales ratio shows that the firm is generating substantial economic value from its operations, while a lower ratio may suggest inefficiencies, low margins, or minimal wealth creation. The ratio is particularly useful for comparing performance across firms or industries, as it standardizes value creation relative to sales volume, allowing for more meaningful assessments. It provides a lens through which stakeholders can evaluate the effectiveness of resource utilisation, operational efficiency, and the impact of strategic decisions such as diversification or innovation. By focusing on the value

added to sales ratio, firms can identify strengths and weaknesses in their revenue-generating activities and understand the degree to which sales translate into economic benefits.

Product Diversification and Value Added

Product diversification refers “to the deliberate strategy of expanding a firm’s range of products or services to offer more variety to its customers and to reduce reliance on a single product line” (Ezeana et al., 2024). It entails the introduction of new products or the modification of current ones to accommodate evolving consumer preferences, fulfil unmet demands, or react to changes in the competitive landscape. Gunu (2022) submitted that product diversification allows firms to reach new market segments, attract different customer groups, and enhance the appeal of their offerings. By offering multiple products, a firm can spread risks associated with fluctuations in demand for a particular item and create additional revenue streams (Omaliko & Okpala, 2022). The essence of product diversification is rooted in the idea of broadening the range of goods or services in order to capture opportunities that may not exist within the firm’s original product line (Okoye & Ezenwafor, 2022). By focusing on value added, firms can evaluate their role in wealth creation, assess the effectiveness of operational strategies, and make informed decisions that enhance long-term sustainability and stakeholder benefits. The measurement of value added allows stakeholders to understand how much economic value a firm generates and distributes, offering a clear perspective on its contribution to overall economic growth (Acuña-Opazo & González, 2021).

Subsidiary Diversification and Value Added

Subsidiary diversification involves the expansion of a firm’s operations through the establishment or acquisition of separate business units that operate under the control of the parent company (Gunu, Suleiman & Omolekan, 2021). These subsidiaries may function in related or unrelated industries, but their existence allows the parent organisation to engage in multiple lines of business while maintaining centralized oversight and strategic alignment. Subsidiary diversification is often pursued to spread business risks, enhance market coverage, and utilize existing resources and capabilities more efficiently across different organisational units (Ezeana et al., 2024). By creating or acquiring subsidiaries, a firm can enter new sectors without fully merging with or absorbing other companies, preserving flexibility in operations while benefiting from the combined strength of the corporate group. Subsidiaries operate as semi-independent entities, which allows managers to focus on specific markets, products, or services while contributing to the broader objectives of the parent company (Wang, Chen, Ye & Zhong, 2024). The concept of value added emphasizes not only financial outcomes but also the overall economic contribution of the firm. It is closely tied to productivity, efficiency, and competitiveness, as it shows the capacity of a business to create surplus value that exceeds the cost of inputs.

Regional Diversification and Value Added

Regional diversification refers to the strategy by which a firm expands its operations across different geographic areas to reduce dependence on a single market and to access new customer bases (Ezeana et al., 2024). This approach allows organisations to operate in multiple regions, which may vary in terms of economic conditions, regulatory environments, consumer behavior, and competitive dynamics. By spreading operations geographically, firms can manage risks

associated with localized economic downturns, political instability, or market saturation, and can benefit from opportunities that arise in diverse locations. Value added is a critical indicator of organisational performance, providing a measure of how well a firm transforms resources into outputs that have greater utility and economic significance (Muojekwu et al., 2025). Value added is therefore a critical indicator of organisational performance, providing a measure of how well a firm transforms resources into outputs that have greater utility and economic significance (Muojekwu et al., 2025). By focusing on value added, firms can evaluate their role in wealth creation, assess the effectiveness of operational strategies, and make informed decisions that enhance long-term sustainability and stakeholder benefits.

In summary, in a well-functioning business environment, firms should be able to design strategies that consistently create value for their stakeholders. Business diversification, when properly managed, has the potential to improve efficiency, spread risks, and increase wealth creation (Olalere, Islam & Rahmi, 2021). By diversifying through subsidiaries, geographical markets, and product offerings, firms can achieve stability in revenue, enhance competitiveness, and ensure that their operations contribute meaningfully to long-term sustainability. In this situation, diversification serves as a driver of innovation, a shield against economic shocks, and a pathway to greater value added for shareholders, employees, and the wider society.

Theoretical Foundation

The study is anchored on Ansoff's Growth Matrix Theory which was developed by Igor Ansoff in 1957 as a strategic management tool to help firms identify growth opportunities (Clarissia, 2020). Ansoff proposed that organisations could achieve growth by exploring new or existing products and markets. His work laid the foundation for understanding how businesses could systematically expand their operations through different strategies rather than relying solely on incremental or ad hoc decisions. Four primary growth strategies are proposed by the theory: diversification, market development, market penetration, and product development (Gurcaylilar-Yenidogan & Aksoy, 2018). The goal of market penetration is to boost sales of current items in current markets. Product development is to introduce new items to existing markets, whereas market development entails bringing current products into new markets. The most difficult technique, diversification, calls for businesses to launch new goods into markets that may or may not be connected to their present business operations. Every approach has a variable degree of risk, according to Ansoff, with diversification having the most risk because of its novelty and unpredictability (Yin, 2016).

The relevance of Ansoff's Growth Matrix Theory to this study lies in its explanation of how diversification strategies influence firm performance and value creation. By using the framework, the study can analyze how consumer goods firms in Nigeria employ subsidiary diversification, regional diversification, and product diversification to enhance the value added to sales. The theory provides a clear rationale for examining the link between strategic expansion decisions and financial outcomes. It supports the notion that carefully planned diversification can increase revenue streams, spread operational risk, and strengthen market presence, ultimately impacting the overall value a firm generates.

2.3 Review of Some Empirical Literatures

Abdulrauf et al. (2025) explored how income diversification influences the financial sustainability of non-financial firms in Nigeria. The study used a multi-stage selection procedure to choose 84 organisations from 104 listed non-financial enterprises using a longitudinal research methodology. Data from the ESG-CSR Hub and these companies' annual reports were gathered, and panel data regression using the Generalised Least Squares method was used for analysis. The findings showed that the financial viability of listed non-financial companies in Nigeria is positively impacted by income diversification. In order to lower investment and operational risks, the report advised businesses to find extra complementary revenue streams, especially in industries with strong development potential.

Ezeana et al. (2024) assessed the effect of corporate diversification on the value of listed conglomerates in Nigeria, focusing on product, subsidiary, regional, and sector diversification and their impact on Tobin's Q. Five of the six listed conglomerates were chosen through purposive sampling for the years 2012 to 2023 using an ex post facto research design. Regression models were examined for heteroskedasticity, normality, and multicollinearity using secondary data collected from annual reports during the twelve-year period. To take outliers into consideration, robust least squares regression analysis was used. The results showed that while subsidiary and regional diversification have a favourable impact on business value, product diversification has a negative impact. It was also discovered that sector diversification had a negative impact on corporate value, suggesting that not all types of diversification increase conglomerate value in Nigeria.

Ibojo and Owoeye (2024) examined how diversification affects organisational performance in selected manufacturing industries in Southwest Nigeria. Despite numerous studies on diversification in Nigerian manufacturing, results have been mixed, creating a research gap. The purpose of the study was to look into how organisational effectiveness is affected by both linked and unrelated diversity. The study population, which used an ex-post facto design, comprised workers from 22 manufacturing companies that were listed in the Nigerian Exchange Group between 2011 and 2020. These companies included conglomerates, food and beverage companies, breweries, and healthcare. A sample of eight firms comprising 750 employees was drawn through stratified sampling, representing half of the population. Results showed that related diversification significantly improves performance, while unrelated diversification negatively affects it.

Susanto et al. (2024) investigated the impact of income diversification on the financial health of banks in Indonesia, focusing on revenue streams that enhance profitability and financial stability. Using a quantitative, associative research approach, the study covered banks listed on the Indonesia Stock Exchange from 2020 to 2023, with 168 observations selected through purposive sampling. Data were analyzed using panel regression in Eviews 12. Findings showed that overall revenue diversification increases profitability but reduces financial stability. Conversely, non-interest income negatively affects profitability but improves stability, with commission income being the most reliable component for boosting profits.

Muriuki (2024) investigated how income diversification affected Kenyan commercial banks' financial performance by looking at revenue from commissions and fees, dividend income,

foreign exchange trading, and transaction fees. Financial intermediation, agency, and portfolio theories served as the study's foundation. 38 commercial banks were included in the population between 2019 and 2023, and data was gathered using a census approach. Descriptive statistics and inferential techniques like panel regression and Pearson correlation were combined in an explanatory study design, and model validity was guaranteed by diagnostic tests. The findings showed that commissions and fees, dividend income, foreign exchange trading, and transaction fees all had a substantial and favourable impact on bank performance.

Devkota (2024) investigated how income diversification impacts Nepal's commercial banks' stability and financial profitability. Return-on-assets (ROA) and Z-score were the study's dependent factors; bank size, non-interest income to total assets, capital adequacy ratio, GDP growth rate, operating income to expenses ratio, and credit risk were its independent variables. The study discovered that credit risk had a negative impact on both ROA and Z-score, suggesting that rising non-performing loan levels lower profitability and financial stability. On the other hand, both ROA and Z-score were positively impacted by the capital adequacy ratio, indicating that better capital situations improve financial performance. ROA and return on equity were both positively impacted by non-interest income to total assets, indicating that banks with higher non-interest revenue likely to be more profitable.

The impact of corporate diversity on the financial performance of deposit money banks listed on the Nigerian Stock Exchange was examined by Okpoa and Damiana (2023). The study used annual report data from thirteen listed deposit-taking institutions to look over a ten-year timeframe from 2010 to 2019. Specialisation, related diversification, unrelated diversification, and cross-border diversification were the predictor variables. Two accounting indicators and one economic measure were used to gauge firm success. The study, which used the panel generalised least squares method, discovered that company performance in Nigerian banks was significantly impacted by both specialisation and associated diversification. The paper recommended that banks pursue cross-border expansion while maintaining services in areas of expertise to strengthen overall performance.

Okegbemiro and Adim (2023) assessed the effect of diversification strategies on the profitability of selected food and beverage firms in Lagos State, Nigeria. A survey design was used, targeting a population of 12,495 employees across six selected firms. Using the research advisor sampling table, a sample of 491 employees was selected, and data were collected through a validated questionnaire with a Cronbach alpha above 0.7. Analysis was performed using descriptive statistics and multiple regression in SPSS version 24. Results indicated that diversification significantly affects profitability ($\beta=0.947$, $t=47.805$, $R^2=0.839$, $p=0.001$). The study concluded that firms can achieve higher profitability by exploring new distribution channels, investing in marketing and branding, and improving operational efficiency.

3. METHODOLOGY

Ex-post facto research design was adopted and used to describe the effects of business diversification on the value added to sales ratio (VASR) among 15 selected consumer goods firms in Nigeria for a period of thirteen (13) years spanning 2012 to 2024. The ex-post facto design is suitable because it allows for examining relationships between variables that have

already occurred (Ikwuo et al., 2025), particularly where the researcher cannot manipulate the independent variables (product diversification (PROD), subsidiary (SUBD) and regional (REGD)). The model adopted in this study assumed a linear relationship between business diversification and VASR and panel least square was adopted for the purpose of hypothesis testing and was guided by the following linear model:

$$VASR_{it} = \beta_0 + \beta_1 PROD_{it} + \beta_2 SUBD_{it} + \beta_3 REGD_{it} + \epsilon_{it} \dots \dots \dots 1$$

Where:

$VASR_{it}$ = Value added to sales ratio of firm i at time t

$PROD_{it}$ = Product diversification of firm i at time t

$SUBD_{it}$ = Subsidiary diversification of firm i at time t

$REGD_{it}$ = Regional diversification of firm i at time t

β_0 = Intercept

$\beta_1, \beta_2, \beta_3$ = Coefficients of independent variables

$\epsilon_{it} \dots$ = Error term

Where the measurements for all the variables are shown in the table below:

Table 1: Measurements for all Variables

<i>Variable</i>	<i>Measurement</i>	<i>Source</i>
<i>Dependent Variable:</i>		
<i>Value Added to Sales Ratio (VASR)</i>	<i>Net profit before interest ÷ Total capital employed</i>	(20)
<i>Independent Variables:</i>		
<i>Product Diversification (PROD)</i>	<i>Number of distinct products contributing to firm revenue</i>	(8)
<i>Subsidiary Diversification (SUBD)</i>	<i>Number of subsidiaries contributing to firm revenue</i>	(8)
<i>Regional Diversification (REGD)</i>	<i>Number of geographical regions contributing to firm revenue</i>	(8)

Researchers Compilation, (2026)

4.1 RESULTS AND DISCUSSION OF FINDINGS

The study looked at how company diversification affected Nigerian publicly traded consumer goods businesses' value-added to sales ratio between 2012 and 2024. Preliminary data testing, such as variance inflation factor (VIF), correlations analysis, and descriptive statistics, were performed in the study. The data was analysed using descriptive statistics to determine its nature and normalcy. The presence of multi-collinearity was tested and the relationship between the variables was determined using correlation analysis. The Variance Inflation Factor (VIF) was used to test for the existence of multi-collinearity in order to further confirm the situation of perfect correlation among variables. Lastly, panel regression analysis was employed in the study to test the hypotheses. The table below shows the descriptive statistics of the 15 selected consumer goods firms that make up our sample.

Table: 2 Descriptive Statistics Analysis

	PROD	SUBD	REGD	VASR
Mean	2.594872	1.579487	2.205128	0.300974
Median	2.000000	0.000000	2.000000	0.250000
Maximum	7.000000	17.00000	7.000000	13.22000
Minimum	1.000000	0.000000	1.000000	-3.340000
Std. Dev.	1.590881	3.469691	1.299871	0.981066
Skewness	1.081638	3.007013	1.860241	11.53820
Kurtosis	3.345386	12.68029	6.533671	156.7943
Jarque-Bera	38.99232	1055.247	213.9217	196504.7
Probability	0.000000	0.000000	0.000000	0.000000
Sum	506.0000	308.0000	430.0000	58.69000
Sum Sq. Dev.	490.9949	2335.518	327.7949	186.7233
Observations	195	195	195	195

Source: researcher's summary of descriptive result (2026)

Descriptive statistics of the independent variables included in the full model for the sample of 195 observations over a 13-year period are displayed in the result above. The mean, standard deviation, minimum, and maximum values of the variables under investigation are displayed in the results. The tested consumer products companies produce almost 30% value added in relation to their sales, according to the Value Added to Sales Ratio (VASR), which has a mean of 0.3011. While the minimum value of -3.3368 indicates that some firms suffered negative value added, potentially as a result of losses or operational inefficiencies, the greatest value of 13.2159 indicates that some firms achieved extraordinarily high value added relative to sales. The significant variation in value added among the enterprises over the study period is shown in the standard deviation of 0.9807. With a skewness of 11.5394, the distribution is strongly positively skewed, with a few extreme high values extending the distribution while the majority of enterprises cluster at lower VASR values. The occurrence of abnormally high or low values is further highlighted by the kurtosis of 156.8060, which displays a highly peaked distribution with extreme outliers. The VASR data do not follow a normal distribution, as confirmed by the Jarque-Bera probability of 0.0000 (Table 2), requiring cautious interpretation and possibly the application of robust statistical techniques.

With a mean of 2.5949 for Product Diversification (PROD), businesses typically offer two to three different items. The lowest number of 1 indicates businesses that only provide one product, while the greatest value of 7 indicates that some businesses have greatly expanded their product lines. The standard deviation of 1.5909 indicates a moderate degree of variation in product diversification among the firms. A distribution with a skewness of 1.0816 is somewhat positively skewed, indicating that the majority of businesses have very little product diversification, with a small number of highly varied businesses. A modestly peaked

distribution with some outliers is suggested by the kurtosis of 3.3454. The Jarque-Bera probability of 0.0000 attests to the non-normality of PROD.

The mean of Subsidiary Diversification (SUBD) is 1.5795, indicating that companies typically run one to two subsidiaries that generate income. While the lowest number of 0 indicates that some businesses do not have subsidiaries, the largest value of 17 indicates that some businesses have greatly expanded through subsidiaries. The standard deviation of 3.4697 indicates that enterprises' subsidiary diversification varies significantly. The data are positively skewed, with a skewness of 3.0070, meaning that while most businesses have few subsidiaries, a small number of businesses have an abnormally large amount. A leptokurtic distribution with a kurtosis of 12.6803 indicates the occurrence of extreme values. The non-normal distribution of SUBD is confirmed by the Jarque-Bera probability of 0.0000, which could affect statistical conclusions.

The average Regional Diversification (REGD) score is 2.2051, meaning that businesses typically operate in about two different geographical areas. Businesses that operate in only one region are represented by a minimum of 1, while those that have grown into many regions are represented by a maximum of 7. In terms of regional coverage, the standard deviation of 1.2999 indicates a considerable degree of heterogeneity among organisations. A somewhat good skewness is shown by the skewness of 1.8602, which indicates that most businesses operate in fewer regions, with a few exceptions spreading into several areas. A leptokurtic distribution is indicated by the kurtosis of 6.5337, which highlights a concentration around the mean with a few outliers. The fact that the Jarque-Bera probability is 0.0000 indicates that REGD is not regularly distributed.

Pearson Correlation Matrix

In order to ascertain the type or degree of association, i.e., positive or negative correlation, and the magnitude of the correlation between the dependent variable (value added to sales ratio) and independent variables with other explanatory variables, Pearson's correlation matrix was utilised to assess the degree of association between business diversification and value added to sales ratio of quoted consumer goods firms in Nigeria. Consequently, we used the Pearson correlation coefficient (correlation matrix) to investigate the relationship between the variables, and the outcomes are shown in the table below.

Table 3: Correlation Analysis Result

Pearson Correlation

Date: 09/12/25 Time: 06:41

Sample: 2012 2024

Included observations: 195

Covariance				
Correlation				
Probability	VASR	SUBD	REGD	PROD
VASR	0.956887			
	1.000000			

SUBD	-0.188387	11.97702		
	-0.055647	1.000000		
	0.4397	-----		
REGD	-0.026129	0.019592	1.680999	
	-0.020602	0.004366	1.000000	
	0.7750	0.9517	-----	
PROD	-0.110378	1.675792	0.436949	2.517922
	-0.071110	0.305158	0.212386	1.000000
	0.3232	0.0000	0.0029	-----

Source: researcher’s summary of correlation result (2025)

The correlation coefficient's outcome indicated a mixed correlation. This correlation supports the idea that there is a linear relationship between our variables. Additionally, the Pearson product-moment correlation, which measures the strength of the relationship between variables, revealed that the association between the variables is relatively small and falls below the threshold of 0.80, indicating that multicollinearity in the predictor variables is not a problem.

The correlational analysis in Table 3 above examines the linear relationships between the Value Added to Sales Ratio (VASR) and the three dimensions of business diversification—subsidiary (SUBD), regional (REGD), and product (PROD) diversification—across 195 observations from 2012 to 2024. The Pearson correlation coefficients indicate that VASR has a weak negative relationship with SUBD (-0.056), REGD (-0.0204), and PROD (-0.0712), suggesting that higher levels of subsidiary, regional, or product diversification are slightly associated with lower value added to sales ratios among the sampled firms. However, the probability values show that none of these correlations are statistically significant at conventional levels: SUBD ($p = 0.4397$), REGD ($p = 0.7750$), and PROD ($p = 0.3232$). This implies that, based on the sample data, there is no evidence of a meaningful linear association between business diversification strategies and value added to sales ratio in Nigerian consumer goods firms during the study period. The low correlation magnitudes and high p-values indicate that other factors beyond diversification may have a stronger influence on VASR.

Test of Multicollinearity

The Variance Inflation Factor (VIF) and its counterpart, or tolerance, were calculated to test multicollinearity. The degree to which regressors are connected to one another and how this influences the stability and variance of the regression estimates are measured by collinearity diagnostics. We used the Variance Inflation Factor (VIF) to further check for the multicollinearity problem or to determine whether the independent variables used are perfectly correlated. The table below displays the Variance Inflation Factor (VIF) result:

Table 4: Variance Inflation Factor Result

Variance Inflation Factors
 Date: 09/12/25 Time: 23:55
 Sample: 2012 2024
 Included observations: 195

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.027868	5.594655	NA
PROD	0.002294	4.260730	1.159643
SUBD	0.000461	1.338015	1.107355
REGD	0.003116	4.093836	1.051676

Source: Researcher's summary of VIF result (2025)

The study criteria state that the presence of multicollinearity can only be verified when the variance inflation factor is more than 10. We discovered that there is no intercorrelation between independent variables using the Pairwise rank correlation and the VIF test. The mean value of the independent variables coefficient is less than 10, as is evident from the VIF result in table 3 above. Since all of the variables' variance inflation factor (VIF) values are less than 10, multi-collinearity has little influence. This suggests that all of the variables were retained in the regression model because there was no multicollinearity issue with the variables. Consequently, it may be said that multicollinearity is not an issue.

Regression Results

Panel Generalised Least Squares regression was used to test the hypotheses at a 5% significance level in order to investigate the association between the dependent variable (VASR) and the independent variables (PROD, SUBD, and REGD). The regression result is summarised as follows:

Table 5. Panel Least Regression Result

Dependent Variable: VASR
 Method: Panel EGLS (Period SUR)
 Date: 08/11/25 Time: 06:39
 Sample: 2012 2024
 Periods included: 13
 Cross-sections included: 15
 Total panel (balanced) observations: 195
 Linear estimation after one-step weighting matrix
 White period standard errors and covariance (df. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SUBD	-0.009067	0.000939	-9.651664	0.0000
REGD	0.012247	0.003116	3.930805	0.0001
PROD	-0.030454	0.005505	-5.532244	0.0000
C	0.351590	0.020580	17.08389	0.0000

Weighted Statistics			
R-squared	0.206014	Mean dependent var	0.551357
Adjusted R-squared	0.193543	S.D. dependent var	1.602098
S.E. of regression	0.990286	Sum squared resid	187.3073
F-statistic	16.51943	Durbin-Watson stat	2.036444
Prob(F-statistic)	0.000000		

Source: Researcher's summary of regression result (2025).

As shown above in Table 5, the model's overall validity is reflected in the adjusted R-squared of 0.1935, which shows that approximately 19.35% of the variation in the value added to sales ratio (VASR) across the sampled Nigerian consumer goods firms is explained by subsidiary diversification (SUBD), regional diversification (REGD), and product diversification (PROD). While this value is modest, it is not uncommon in studies involving firm-level financial data where multiple unobserved factors can affect performance. The Durbin-Watson statistic of 2.036 suggests that there is no significant autocorrelation in the residuals, satisfying the assumption of independence. Additionally, the probability of the F-statistic is 0.0000, confirming that the overall regression model is statistically significant at the 5% level and that the set of independent variables collectively explains a meaningful portion of VASR variation. The constant term (C) has a coefficient of 0.3516 with a p-value of 0.0000, which is significant at the 5% level. This shows that if subsidiary, regional, and product diversification were hypothetically zero, the expected baseline value added to sales ratio for the sampled firms would be 0.3516. Essentially, this is the intercept of the model, representing the average VASR independent of diversification activities. The statistical significance reinforces that the model's baseline level of VASR is reliably different from zero.

Sequel to the above regression result, subsidiary diversification showed a negative coefficient value -0.009067, meaning that for each additional subsidiary contributing to firm revenue, the VASR is expected to decrease by 0.0091 units, holding other variables constant. This negative marginal effect suggests that expanding the number of subsidiaries slightly reduces value added relative to sales. The p-value of 0.0000 shows that this negative effect is statistically significant at the 5% level. Therefore, we accept the alternate hypothesis and conclude that subsidiary diversification significantly affects the value added to sales ratio among listed consumer goods firms in Nigeria.

The coefficient for regional diversification is 0.012247, which implies that for each additional geographical region contributing to firm revenue, the VASR increases by 0.0122 units, holding

other factors constant. This positive marginal effect shows that spreading operations across multiple regions slightly enhances the value added relative to sales. The p-value of 0.0001 is below the 5% significance threshold, indicating that the effect is statistically significant. Thus, the alternate hypothesis is accepted, and we conclude that regional diversification has a significant positive effect on the value added to sales ratio among the sampled firms.

The coefficient for product diversification is -0.030454, suggesting that for every additional distinct product contributing to revenue, the VASR decreases by approximately 0.0305 units, ceteris paribus. This shows a relatively stronger negative marginal effect compared to subsidiary diversification, implying that increasing product variety may dilute value added relative to sales in these firms. The effect is highly significant at the 5% level, as reflected by the p-value of 0.0000. Consequently, the alternate hypothesis is accepted, showing that product diversification significantly reduces the value added to sales ratio.

5. Conclusion and Recommendations

The findings of this study carry substantial implications for understanding the dynamics of business diversification and firm performance within the Nigerian consumer goods sector, highlighting the complex and multifaceted nature of strategic growth decisions. The significant negative effect of subsidiary and product diversification on value added to sales ratio suggests that expanding the scope of operations through additional subsidiaries or an increased variety of products may introduce managerial, operational, and financial complexities that diminish efficiency and the ability to generate incremental value relative to sales. Conversely, the positive impact of regional diversification demonstrates that geographical expansion can create opportunities for optimizing resource utilisation, tapping into new markets, and enhancing overall firm performance, reflecting the potential benefits of spatial distribution of business activities. Collectively, these results highlight that diversification is not universally beneficial; rather, its effects are contingent upon the specific dimension of diversification and the firm's capacity to manage associated challenges.

Based on the findings and conclusion, the study recommended that management of listed consumer goods firms should evaluate the strategic necessity and cost-effectiveness of establishing new subsidiaries. Moreover, management of listed consumer goods firms should evaluate the strategic necessity and cost-effectiveness of establishing new subsidiaries while product development and marketing departments within listed consumer goods firms should focus on optimizing and consolidating their product portfolios rather than continuously introducing new products.

REFERENCES

- Abdulrauf, L. A. O., Quadri, Y. O., & Ibrahim, S. A. (2025). Income diversification, esg practices and financial sustainability of listed non-financial firms in Nigeria. *Proceedings of Sustainability, Entrepreneurship, Equity and Digital Strategies (SEEDS 2024)*, 3, 203.

- Acuña-Opazo, C., & González, O. C. (2021). The impacts of intellectual capital on financial performance and value-added of the production evidence from Chile. *Journal of Economics, Finance and Administrative Science*, 26(51), 127-142.
- Ajao, M. G., & Kokumo-Oyakhire, G. A. (2021). Corporate diversification and financial performance of conglomerate firms in Nigeria. *Journal of Business Studies and Management Review*, 5(1), 91-101.
- Babatunde, S. O., Okeleke, P. A., & Ijomah, T. I. (2022). Influence of brand marketing on economic development: A case study of global consumer goods companies. *International Journal of Management and Entrepreneurship Research*, 4(12), 692-708.
- Binuyo, A. O., & Binuyo, B. O. (2020). Diversification strategy and firm profitability: Evidence from selected fast-moving consumer goods firms in Lagos State, Nigeria. *International Journal of Innovative Science, Engineering and Technology*, 6(9), 75-88.
- Clarissia, S. M. S. (2020). A study on Ansoff matrix technique: as a growth strategy and an adaptive learning technique adopted in the leading brand of products. *BIMS Journal of Management*, 18.
- Clinton, E., & Salami, C. G. E. (2021). Impact of diversification strategy on organisational performance in manufacturing firms in Nigeria. *International Research Journal of Management, IT and Social Sciences*, 8(6), 589-604.
- Devkota, A. (2024). Impact of revenue diversification on bank profitability and stability: a case of Nepalese commercial banks. *Nepalese Journal of Economics*, 8(4), 41-60.
- Ezeana, K. S., Ezeagba, C. E., & Ndubuisi, C. J. (2024). Corporate diversification and value of quoted conglomerates in Nigeria. *Journal of Global Accounting*, 10(3), 139-163.
- Gunu, U. S. (2022). Effect of corporate diversification on the financial performance of quoted manufacturing firms in Nigeria. *Journal of Research in Administrative Sciences*, 11(2), 1-9.
- Gunu, U., Suleiman, U. G., & Omolekan, O. J. (2021). Effect of diversification on financial performance of quoted manufacturing firms in Nigeria. *Srusti Management Review*, 14(1), 32-45.
- Gurcaylilar-Yenidogan, T., & Aksoy, S. (2018). Applying Ansoff's growth strategy matrix to innovation classification. *International Journal of Innovation Management*, 22(04), 1850039.
- Ibekwe, I. (2024). Agency motives and the corporate diversification decision: perspectives of corporate executives in Nigeria. *Qualitative Research in Financial Markets*, 16(4), 741-765.
- Ibojo, B., & Owoeye, I. (2024). Effect of diversification on organisational performance of selected manufacturing industries in South West Nigeria. *International Journal of Social Sciences and Management Research*, 9(9), 1-25.
- Ikwuo, A. K., Nwite, I. M., & Nworie, G. O. (2025). Reflecting staff reward in employee output: A validation of Henri Fayol's 7th principle of management using the Nigerian

- manufacturing sector. *Golden Ratio of Human Resources Management*, 5(2), 488–500. <https://goldenratio.id/index.php/grhrm/article/view/957/1030>
- Ismail, O. A., Alli, A. I., Olusegun, K. L., & Udosen, I. I. (2022). Leveraging the strength of diversification strategy in sustaining organisation performance of the Nigerian manufacturing industry. *Fuoye Journal of Accounting and Management*, 5(1).
- Mbai, A., Nyamute, W., Ochieng, D. E., & Muthoni, M. (2022). Corporate diversification and performance of commercial banks in Kenya. *African Development Finance Journal*, 1(1), 1-11.
- Muojekwu, H. O., Ochuka, C. E., & Nworie, G. O. (2025). Value creation in Nigerian listed consumer goods firms through entrepreneurial cash management. *Quantitative Economics and Management Studies*, 6(3). <https://doi.org/10.35877/454RI.gems4059>
- Muriuki, N. (2024). *Revenue diversification and financial performance of commercial banks, Kenya* (Unpublished MBA project, Kenyatta University). Kenyatta University Institutional Repository.
- Nwankwo, C. A., & Kanyangale, M. (2020). Deconstructing entrepreneurial marketing dimensions in small and medium-sized enterprises in Nigeria: Literature analysis, *Journal of Entrepreneurial Venturing*, 24(1), 1-14.
- Nworie, G. O., & Nwoye, U. J. (2023). Drivers of operating profit: a focus on selected firms' costs. *CECCAR Business Review*, 4(2), 62-72. [dx.doi.org/10.37945/cbr.2023.02.07](https://doi.org/10.37945/cbr.2023.02.07)
- Nworie, G. O., Odah, U., & Nworie, F. N. (2024). Managing the challenges of digitisation and a contemporary business issue at Coca-Cola. *International Journal of Academic Accounting, Finance and Management Research (IJA AFMR)*, 8(11), 129-133. Retrieved from <http://ijeais.org/wp-content/uploads/2024/11/IJA AFMR241112.pdf>
- Nwosu, O., Mairafi, S. L., Musa, A. A., & Kolo, I. (2025). Effect of macro-economic factors on financial performance of selected quoted manufacturing companies in Nigeria. *Journal of Human Resources and Management Science*.
- Obaro, V. C., Onuorah, A. C., Evesi, H. O., & Ehiedu, V. C. (2022). Diversification and the performance of quoted banks in Nigeria. *Quest Journal of Research in Business and Management*, 10(10), 46-54.
- Okegbemiro, S. A., & Adim, C. V. (2023). Diversification strategy and profitability of selected food and beverage firms in Lagos State, Nigeria. *Journal of Strategic Management*, 7(1), 141-159.
- Okoye, E. & Ezenwafor, E. (2022). Effect of product diversification on financial performance of non-financial firms listed on Nigerian Stock Exchange, 2007-2017. *International Journal of Contemporary Applied Researches*, 9(1), 42-53.
- Okpoa, A. G., & Damiana, O. E. (2023). Corporate diversification and firm performance: evidence from the Nigerian banking sector. *Journal of Technology Management and Business*, 10(1), 65-78.
- Olalere, O., Islam, M. A., & Rahmi, N. (2021). The effect of revenue diversification on the firm value and stability of banks: A comparative study of Nigerian and Malaysian banks. *Banks and Bank Systems*, 16(3), 141.

- Omaliko, E., & Okpala, N. (2022). Impact of corporate diversification on sustainability of listed health care firms in Nigeria. *Asian Journal of Economics, Business and Accounting*, 22(4), 59–69. <https://doi.org/10.9734/ajeba/2022/v22i430558>
- Onuorah, A. C. (2021). Bank diversification strategies and financial performance in Nigerian economy. *International Journal of Intellectual Discourse*, 4(3), 153-164.
- Orjinta, H. I. & Anetoh, J.C. (2025). Achieving sustainable performance of deposit money banks in Nigeria through artificial intelligence strategies. *Innovations*, 80, march 2025, 264-280
- Orjinta, H.I., Udoezika, D. & Korim, C. S. (2024). Effect of corporate diversification on performance of quoted companies in Nigeria. *Journal of accounting and financial management* 10(8), 96-122. DOI: 10.56201/jafm. v10.n08.2024.pg696.122.
- Singh, P., & Saxena, P. (2017). Value added ratios as a performance indicator for profitability and productivity measurement: A study of selected Indian companies. *Prastuti Journal of Management and Research*, 6(1), 11–18.
<https://doi.org/10.51976/gla.prastuti.v6i1.611702>
- Suleiman, U. G., & Gunu, U. (2021). Effect of income diversification on the financial performance of quoted manufacturing firms in Nigeria. *Journal of research in emerging markets*, 3(1), 44-57.
- Susanto, F. O., Adib, N., & Prastiwi, A. (2024). The impact of revenue diversification on bank profitability and stability: evidence from Indonesia banking industry. *Jurnal Reviu Akuntansi dan Keuangan*, 14(4), 989-1006.
- Teimet, P. R. (2021). *Revenue diversification, technical efficiency, size and financial performance of commercial banks in Kenya* (Doctoral dissertation, University of Nairobi).
- Velnampy, T. (2011). Value added, productivity and performance of few selected companies in Sri Lanka. *Indian Journal of Commerce and Management Studies*, 2(6), 49-55.
- Wang, S., Chen, X., Ye, J., & Zhong, C. (2024). How diversification of overseas subsidiaries affects parent company innovation performance: evidence from China's multinationals. *Frontiers in Psychology*, 15, 1344816.
- Yin, N. (2016). Application of AHP-Ansoff matrix analysis in business diversification: The case of Evergrande Group. In *MATEC Web of Conferences* (Vol. 44, p. 01006). EDP Sciences.