

## The Effect of Corporate Diversification on Performance of Quoted Companies in Nigeria

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### **Abstract**

*This study evaluates the relationship between corporate diversification and firm performance among diversified firms in Nigeria. The study formulated five objectives and hypothesis, and adopted ex-post facto design. The panel data collected from the financial reports of diversified firms in Nigeria between 2013 and 2022 was analyzed using panel regression. The study proxy corporate diversified using product diversification, and proxy firm performance using return on investment. However some preliminary analyses such as descriptive statistics, correlation analyses were carried out. The study finds that corporate diversification has 55.9% effect on firm performance. The study also finds that product diversification; subsidiary diversification income has positive significant effect on performance of diversified firms in Nigeria. While sector diversification has negative significant effect on performance of diversified firms in Nigeria. The study recommends among others that management of diversified firms should increase their product line, income making opportunity and subsidiaries as this will significantly enhance their firm performance.*

**Key words:** Corporate, Performance, Diversification, Firm

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## Introduction

Corporate diversification has been identified as one of the most important strategies that an entity can adopt to ensure sustained growth, spread growth, spread risk and achieve increase in profits. According to Nanditha Saravanakumar (2024), diversification strategy is a method of expansion or growth followed by businesses. It involves launching a new product or product line, usually in a new market share. The strategy also gives them leverage over their competitors. Corporate diversification strategy can be in the form of foreign diversification, product line diversification, income diversification, regional diversification sector diversification and so on. Corporate organizations diversify their operation and activities for various reasons and in various dimensions. Irrespective of the dimension, the purpose for diversification remain the same across board and they include: risk reduction (through spreading), cost reduction, economies of scale, increase market share, synergies, access to foreign market and finance, better financial performance etc. according to Troy Segal (2023), the product diversification strategy of corporate organization may be toward expanding its product line to include complementary goods, substitute goods or into other region where the market share of the product can increase and the environmental uncertainty is reduced. Cost reduction is viable strategy for increasing profitability of entity; hence most firms can adopt a synergistic approach and economies of scale to reducing operating cost and increasing profit. Also, a firm can venture into the production of substitute goods in a bid to retain customer loyalty, for instance, Nigeria breweries going into the production of herbal drinks. On the other, already existing products which are complementary can use similar raw material or process or both, in such instance, the collective use of physical resources can help to provide cost savings for strategic business units (Caroline Banton, 2023). This cost reduction can also be done by centralizing some activities such as legal services, supervision, human resources, public relation, internal audit, investment decisions etc. In order to reduce the administrative and over head cost per unit of product (Alicia Tuovila, 2022).

Diversification strategy of corporate organization will require investment which if effectively utilized would result to achieving the goal of diversification which is to reduce risk, enhance competitive advantage, and financial performance. The corporate diversification in product line, subsidiary or regional line is crucial for the firms to succeed in a competitive environment. The diversification strategy has come benefits which range from spreading of risk, benefit of economies of scale, increase in market share, value creation, and maximizing the benefit that comes along with it, the benefit thereof can depend on the effective utilization of assets (Nick Lioudis, 2022). However, for successful diversification strategies to lead to better performance, the management must develop the technical knowhow, skill and competency required to effectively manage diversification. The diversification strategy if focused on gaining the advantage of economies of scale and scope alone, the increased size will create additional challenge and difficulties to management if they lack the needed technical knowhow, skill and competency. However, the extent too which the diversification strategies affect the level of firm performance among firm in Nigeria is lacking.

No corporate organization can compete favorably, spread risk and survive on the long run without adopting one form of diversification strategy or the other (Odesa, Ifurueze & Onuorah, 2019). The

diversification will require investment in assets which increases operating cost and the performance of the organization, as poor management of diversification can lead to increase transaction cost, managerial constraint, higher agency cost, higher administrative cost and corporate failure. Despite the importance of the diversification strategy on firm performance empirical studies is scanty in the Nigeria context. Various empirical studies on corporate diversification focus on one aspect of diversification or the other, studies like that of Wei-Hwa, and Wei-Chun (2012), examine regional diversity and firm performance, Askarany and Sprakman (2020), diversity and firm performance; Liu, Li, Tang, Zhao and Chang (2023), product diversity and firm performance; focused on foreign diversification and firm performance; Somnath and Saptarshi (2015) focused on subsidiary diversification; Odesa, Ifurueze and Onuorah (2019) study focus of diversification firms in sub-sahara Africa. The study introduced income diversification which was not used by previous studies. The above constitutes the gap in empirical which this study intends to fill. This study adopts the panel regression analysis approach to ascertain the best combination of diversification strategy that can enhance the performance of firms quoted in Nigeria Stock Exchange.

## **2.0 Review of Related Literature and Hypotheses Development**

### **Firm Performance and Corporate Diversification**

Performance and diversification can be explored from two points of view: financial and organization (the two being interconnected); a company's diversification and performance can be measured based on variables that involve assets, productivity, returns, growth or even customer satisfaction.

Whereas corporate diversification according to Steve Milano (2024), means branching out into new business opportunities, not just expanding your existing business. For example, if you have a dine-in restaurant in one town, opening a second restaurant in the next town is expansion, not diversification. Adding corporate catering is an example of diversification. Offering cooking classes during the mornings, when you are not open for breakfast, would be another example of diversification.

Will Klenton (2023) described financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period. Analysts and investors use financial performance to compare similar firms across the same industry or to compare industries or sectors in aggregate. Ghalem, Okar, Chroqui and Semma (2016) see performance as the various indices used in the evaluation of an entity in a given period.

### **Product Diversification and Firm Performance**

According to Corporate Finance Institute (CFI), Product diversification is a strategy employed by a company to increase profitability and achieve higher sales volume from new products. Diversification can occur at the business level or at the corporate level. According to Robyn (2016)

product diversification is the name given to the growth strategy of companies which is targeted at marketing new products in a new market. Robyn believed that the strategy is risky because of the firm lack of experience in the new market and product, hence the chances of failure is higher than that of the original product.

According to Vladimir Balaz (2023), Firm performance refers to the overall success and effectiveness of a company in achieving its goals and objectives. The implication of the study is that as number of shareholders increases, the lesser the decision of firms to diversify. Product diversification has no significant effect on firm performance of quoted companies in Nigeria...(HO1)

### **Subsidiary Diversification and Firm Performance**

In the corporate world, a subsidiary is a company that belongs to another company, which is usually referred to as the parent company or holding company. The parent holds a controlling interest in the subsidiary company, meaning it owns or controls more than half of its stock. In cases where a subsidiary is 100% owned by another company, the subsidiary is referred to as a wholly owned subsidiary, James Chen (2023). Olamide (2017) define subsidiaries diversification as a extension of the parent company which resemble affiliated firms in a local business group, whose performance level can be determine by the parent company's.

Bhatia & Thakur (2018) examines the causal relationship between the level of diversification and the performance of whether diversification provides an opportunity to improve company performance among Indian companies. Marini and Christiana (2022), asserts in their research that the number of subsidiaries and the type of linkage did not affect the company performance. Subsidiary diversification has no significant effect on firm performance of quoted companies in Nigeria.... (HO2)

### **International Diversification and Firm Performance**

International diversification is a risk management technique that aims to reduce volatility by spreading the risk across multiple geographical regions, (Victoria Collins 2021). According to James Chen (2022), an international portfolio is a selection of stocks and other assets that focuses on foreign markets rather than domestic ones. If well designed, an international portfolio gives the investor exposure to emerging and developed markets and provides diversification.

In the research by Praik and Jorma (2022), there is no significant difference in the performance of firms from advanced and emerging economies. International diversification has no significant effect on firm performance of quoted companies in Nigeria..... (HO3)

### **Income Diversification and Firm Performance**

Wan, Li, Wang, Lu and Chen (2016) described income diversification as the increase in income sources or the balance share among the different Income sources.

diversification not only is a useful strategy in terms of managing disaster risk and improving social welfare, but also may offer a new perspective for the research of vulnerability, resilience, and adaptive ability of firm performance.

Ilyas, Sindhu, Haq and Ali (2014) opine that income diversification gives companies the opportunity to meet their obligation even with high level of uncertainty. The merit of income diversification also comes with associated transaction and coordination costs which can negatively impact on the company's performance. Their study empirically shows that these benefits do arise at the early stage of income diversification but diminish gradually due to transaction and coordination cost. The finding suggests that income diversification is positively associated with firm performance. Income diversification has no significant effect on firm performance of quoted companies in Nigeria... (HO4)

### **Sector Diversification and Firm Performance**

The United Nations Climate Change (UNCC), defined economic diversification is the process of shifting an economy away from a single income source toward multiple sources from a growing range of sectors and markets. Traditionally, it has been applied as a strategy to encourage positive economic growth and development. Emel & Yildirim (2016) sees industrial diversification as markets differentiation and carrying out operation in more than one sector. Hence, firms are considered as industrially diversified if they operate in more than one sector of the economy. Thus, companies that are operating in two or more different sectors are considered industrially diversified; on the other hand, a company is considered diversified if it operates in the same Sector but at different stage of production. In the later case, the company is considered diversified but not industrial diversification. For instance, a beverage company setting up plant for the production of bottles or plastics for packaging its beverages. The company and the new plant set up are in the same sector (consumer goods) but at different stage of production.

Sector diversification is aimed at providing goods and services that appeal to multiple markets rather than focusing on a product line that appeals to mainly one market.

Results from the research made by Somnath and Saptarshi (2015), indicates that the influence of Business Group (BG) size and diversity on diversification-firm performance relationship varies significantly depending on whether the focal firm belongs to the manufacturing or service sector. Sector diversification has no significant effect on firm performance of quoted companies in Nigeria.... (HO5)

### **Theoretical Framework**

This study was anchored on the competence based theory. The theory was established in the early 1990 by Sanchez and Heene, (1996), the theory explains how firm develop sustainable competitive advantage in a systematic and structural way. The theory of incorporates economic, organizational and behavioral concerns in a framework that is dynamic, systemic, cognitive and holistic. The theory sees competence as the ability to sustain the deployment of firm's resources in ways that helps the firms achieve its goals. The theory believe that the exploration of new resources and its capabilities combine with exploiting existing ones is vital to maintaining sustainable competitive advantage (e.g. Sanchez et al. 1996). The exploitative nature of resources is a process of

competence leveraging that occurs when a firm applies its existing resource competence to current or new markets, and the explorative nature of firm behavior involves a process of competence building that involves qualitative change to existing resources performance or capabilities (Sanchez & Heene, 1996). The competence of an organization resource can be expressed through its ability to respond to the dynamic nature of an organization's external environment and of its own internal processes. Developing new resource competences and leveraging on existing ones can create a variety of different challenges to organizations as its effectiveness is dependent on the firm's entrepreneurial efforts. Thus, the extents to which a firm can benefit from product diversification depend on its ability to leverage on new resource competences and existing ones. The benefit of diversification into new product line can be made possible when the firm can develop sustainable competitive advantage through the performance of its unique asset at a minimal cost. The theory explains the relationship that exists between product diversity and firm performance.

### **Empirical Review**

Ranka, Vladimir and Dragan (2017), conducted an in-depth evaluation of the impact of corporate diversification on the financial performance of insurance companies operating in the republic of Serbia. The study was based on ex-post facto and used panel data collected between 2004 and 2014 fiscal year. The study measured performance using accounting indicators like return on firms, return on equity, while diversification was measured using entropy. The data collected was analyzed using descriptive statistics, regression and unit root test using Breiting test. The result indicates that diversification has positive significant impact on the level of performance of insurance companies. The study also reveals that diversified insurers outperform the undiversified insurance firms. The study recommends that insurance companies should diversify in other to ensure sustainable growth in size, increase market capitalization and sustainable performance.

Qiming, Yiping, Cheng and Xiaoguang (2016) evaluate the impact of diversification on the performance of energy companies listed in china stock exchange between 2009 and 2015. The study used Sector diversification and internal diversification as the explanatory variables while financial performance was used as the response variable. The longitudinal data used were collected from companies quoted under the coal, solar power, wind power, and oil and refinery in line with the Industrial Classification Standard (ICS) used for companies classification. The data was analysis using descriptive statistics. The study finds that international diversification positively impact the performance of companies in the renewable energy sector, but negatively impact the performance of conventional energy firms; The findings also shows industrial diversification is negatively impacting the level of corporate performance. The study recommends based on the findings that companies in energy sector of the China's economy should pay more attention to their main businesses and generate more products to satisfy market demand.

In a similar study carried out Somnath and Saptarshi (2015), examine the relationship that exists between sector diversification and firm performance using conglomerate and manufacturing companies in Indian. The study adopted a comparative approach using conglomerate and manufacturing companies listed in Indian between the period of 2004 and 2008. The data collected was analyzed using regression analysis, and the result indicates that a strong positive relationship exists between corporate diversification and firm performance, but the level is higher in

conglomerate companies than in manufacturing companies. The finding also reveals that the influence of conglomerate size and diversity on performance varies significantly, this depends on whether the companies belong to the manufacturing sector or not.

Muzammal, Ehtasham and Sajid (2014), assessed the relationship that exist between corporate diversification and the performance of companies in Pakistan. The study adopted the comparative analysis approach using sample of eight (8) diversified companies and eight (8) undiversified companies listed on the Karachi's stock exchange between 2004 and 2009 financial year. The study used correlation analysis, and regression analysis on the panel data collected from the companies used in the study. The result shows the absent of multi colinarity among the variables. The study finds that diversified companies are more risky than the undiversified firms; the result also shows that those diversified companies have higher leverage than undiversified companies. The study concludes that undiversified companies have greater returns than the diversified as a result of low proportion of the risk.

Chang, Timo and Alan (2014) examine the relationship that exists between diversification and performance of international retails companies. The study sued longitudinal data collected from sixty eight (68) retails companies in nineteen (19) countries within the period between 1997 and 2010. The study used regional and product diversification as explanatory variables, while return on sales and earnings before interest and tax were used as a response variables. The analysed the data using descriptive statistics, correlation and regression analysis. The effect specification test was done using Hausman effect test, variance inflator and interaction analysis was done on the data collected from the variables. The study finds that regional diversification has a relationship with level of firm performance. The result of the product diversification reveals that unrelated product diversification has negative moderating effect on the relationship between regional diversification and firm performance. Recommend that retail firms first develop firm-specific capabilities in their home-region market before they operate, if ever, in global markets.

Keith (2013), evaluates the effect of regional diversification on the performance of the world largest six hundred companies. The data were collected from Bloomberg and the Directory of Corporate Affiliates. The study was based on ex-post design and the panel data was analyzed using the general estimation equation analysis and multivariate regression techniques. The result shows that regional diversification has an impact on financial performance and negative impact on social performance of the largest companies used in the study. Using the economic, environmental and social performance measure as mediating variables, the study examines the relationship between regional diversification and firm reputation applying the structural equation model. The study finds that regional diversification has positive effect on the reputation and economic performance. The study reveals that regional diversification affects level of performance, but the effect varies in accordance with the performance criterion and context. The study recommends that management of companies should pay attention to regional diversification because of its negative impact on economic, environmental, and social performance indicators.

In another related study by Alayemi (2013) on the relationship between firm performance and diversification (subsidiary) policy of food and beverage firms listed on the floor of the Nigerian Stock Exchange between 2007 and 2011. The study adopted ex-post facto research design method and used secondary data collected from the financial statement of the sampled companies. The

study classified firms into various class and in firms. The result finds that in firms have significant impact on subsidiary diversification, while firms has weak but positive impact on subsidiary diversification on listed on the floor of the Nigerian Stock Exchange.

Athar and Irfan and Majid (2012), evaluates the impact of diversification on the performance of companies listed in the Karachi, Lahore and Islamabad Stock Exchange. The study used data collected from forty (40) companies between 2005 and 2009; the companies were selected using the Specialization Ratio (SR). The study segregated the firm using the level of diversification – highly diversified, moderately diversified and less diversified, company's performance was measured using three measures- return on firms, market return and return on equity. The data collected was analyzed using analysis of variance, histogram, Skewness and Kurtosis The study finds negative relationship between the level of diversification and the performance of firms. The result shows that all the companies used in the study are performing equally whether they are highly diversified, moderately or less diversified with respect to their market return and the level of risk.

Oladele (2012), studied the effect of product diversification on the financial performance of companies quoted on the Nigeria Stock Exchange. The study used data collected from listed companies under the manufacturing sector between 2006 and 2010. Firm financial performance was proxy by return on assets, while product diversification was measure using the proxy of dummy variable; dummy (1) for manufacturing companies with more than one product and dummy (0) for companies with only one product. The study used Hausmann test to evaluate the effect (fixed or random) that plays on the data within the period and ordinary least square analysis to test the extent of effect that the explanatory variable has on the response variable. The study finds product diversification positively impacts the level of financial performance of firms.

Wei-Hwa and Wei-Chun (2012) recently assessed the nexus between international, regional diversification and corporate performance. The study used longitudinal data collected from the sample of two hundred and eight one (281) companies in Taiwan between from 2002 to 2005. The data collected was analyzed using regression analysis. The study finds that a relationship exists between regional diversification and level of performance of the sampled Taiwan companies. The result shows the international diversification has low effect on performance the sampled companies but regional diversification has positive significant impact on the performance of the sampled companies in Taiwan.

Ibrahim, and Ihsan (2011) assessed the extent of impact that diversification strategies has on the level of organizational performance. The study used a cross sectional data collected from 318 companies listed on the Istanbul Stock Exchange in 2007. The study adopted the three Rumelt diversification classification; core business diversification, related diversification and unrelated diversification, concentric diversification, and compares the impact across country line. Financial performance was measured using return on firms and return on sales. The result reveals that diversification and corporate performance differ greatly along developed and developing countries. The finding shows that the relationship between diversification and level of performance varies among the developed countries.

Nasiru, Ibrahim, Yahya and Aliyu (2011) investigated the relationship between product diversification and the level of financial performance using selected companies in the construction



Sector. The study used specialization ratio criteria to categories the companies into three groups: Undiversified, moderately diversified and highly diversified firms; while the level of performance was used to group the companies using profit ratios. T test employed on the data collected in other to determine the extent of relationship that exist between diversification and performance of construction companies listed in Nigeria stock exchange. The study finds that undiversified companies outperform highly diversified companies using return on firms and profit margin. The result indicates that moderately diversified companies outperform the companies that are highly diversified using return on firms, return on equity, and profit margin as proxy for financial performance. On the other hands, the study finds no difference between the performance of companies that is undiversified and the companies that are moderately diversified using the three measure of financial performance. In summary, the study concluded that diversification does not improve the level of profitability of companies in construction Sector. The study recommends that companies in construction Sector should focus on other activities that can improve financial performance beside diversification.

Wei-Hwa, Wei-Chun and Tsung-Yen (2010) assessed the impact of internationalization on firm performance using a sample of business group drawn from Taiwan databank published annually. The pool data was collected from fifty one business group and two eighty one subsidiaries between 2002 and 2005. Return on assets, return on sales and return on equity were used as a measure of financial performance, while regional and Sector diversification. The data collected were analyzed using descriptive statistics, and regression analysis. The study finds that a U shaped relationship exists between regional diversification and the level of financial performance. The study also finds that when regional diversification is used as moderating variable, it has impact on the relationship between country diversification and the level of firm performance. The recommends that a lower level of regional diversification and country diversification can improve the financial performance of listed firms in the Taiwan.

Wan, Norhana and Ismail (2009) investigated the impact of diversification on the performance of Malaysian companies. The study was based on descriptive design and used panel data collected from a sample of seventy (70) Malaysian companies between 2001 and 2005 financial years. The study used, market adjusted return, return on firm as explanatory variables and leverage, firm size, risk and inflation as response variables. The panel data was analyzed using descriptive statistics and multiple regression. The study provides evidence that risk factors have impact on financial performance. It also shows that are undiversified perform better than those that are not diversified strategy. The study finds a different result after controlling for risk, firm size and economic condition using inflation rate as a proxy.

Lähtinen, (2009) examine the impacts of resource usage among diversified companies in Finland using companies in the Retail sector between the period of 2000 and 2007. The study was based on descriptive design and used secondary data collected from the financial report of the companies. The finding reveals that raw material, services, collaboration and technological know-how have affect on the diversification strategy of Retail. The reputation, services and collaboration have the highest positive impact on diversification strategy, while the raw material and technological know-how in enhances the diversification strategy of Retail is more ambiguous.

### **3.0 METHODOLOGY**

The study adopts the ex post facto research design. The study adopts the ex post facto because the study evaluate the cause-effect relationship that exist between the dependent and the independent variable using the data that already existed and the study made no attempt to change it nature and values. The study used the diversified firms quoted in the Nigeria Stock Exchange. The firms used are: A.G. Leventi, Chellarams, John Holts, Scoa, Transcorp, UACN. These diversified firms operate in various sectors of the Nigeria Stock Exchange. The diversified firms are also known as conglomerates firms. The study used, subsidiary, international, income and sector as explanatory variables while firm performance proxy by return on investment

The study used secondary data. The data used were sourced from the annual financial reports of all the quoted diversified companies in the Nigeria Stock Exchange. The data sourced from annual report covered the period of ten years between 2013 and 2022. The study relied on data from such official sources for accuracy and standardization.

The population of this study is all companies quoted in Nigeria Stock Exchanges. The Nigeria stock exchange has a total of 173 firms listed under 11 sectors. The diversified companies are 7 which are randomly chosen. The sample size is all the quoted diversified companies in Nigeria Stock Exchanges. That is, the sample size is the same as the population of the study. The total seven of firms that falls into this category.

#### **Panel Regression Analysis:**

The study used panel data as it considers the cross sectional and time series nature of the sample data used. Since the panel accommodates the time series and heterogeneity effect of the quoted companies. The panel data analysis captures the aforementioned characteristics by including the company's specific effect which may be random or fixed. The study used the Hausmann effect test to select between fixed and random estimation techniques. The estimation result would be evaluated based on individual statistical significance test (t-test) and the overall statistical significance test R. squared (adjusted) while the goodness of fit of the model was tested using the F-statistics. The study also conducted some diagnostics analysis such as descriptive statistics, and correlation using E-view 10 software.

#### **Diagnostics test:**

The descriptive statistics was used to evaluate the characteristics of the data: Mean, maximum, minimum, and standard deviation and also test for normality of the data. The correlation analysis was used to evaluate the association between the variables and to check for inti-colinearity. The panel regression analysis was used to evaluate the causa-effect relationship that exists between the independent variables on the dependent variable. It reveals the degree of effect the independent variables has on the dependent variable.

#### **Product Diversity:**

This study used binary values for firm that have more than one product are assign the value of one and firm having only one product is assign zero. Number of product line produce and sold by the

firm. The difficulty in using this measurement is the non-disclosure in the annual report by firm the proportion of sales from each product line and the number of product in the company's product portfolio, as they are not disclosed in the annual report. This study used the number of product.

**Subsidiary Diversification:**

Somnah and Saptarhi (2015), measures the degree of subsidiary diversification as subsidiary sales to total sales, while the study of Qiming et al (2016), Hitt et al (2006) used the; **subsidiary asset / group total assets**.

This study adopts the measurement of Qiming et al (2016). This measure shows the extent of the investment made in the subsidiary by the parent firm.

**Model Specification:**

In light of the empirical literature in our previous chapter, the study used panel regression to test the null hypotheses formulated in the study. The model adopted from the work of Odesa et al (2014) used;  $CURASUT = f( PRODIV , SUBDIV , MULTDIV , REGDIV , INCOME , SECDIV )$ .

The model assumes that the dependent variable is a linear function of the independent variables. The model is expressed as follows:

$$ROI = f( PRODIV , SUBDIV , MULTDIV , REGDIV , INCOME , SECDIV ) \dots\dots\dots 1$$

This is econometrically express as

$$ROI_{it} = \pi_0 + \pi_1 PRODIV_{it} + \pi_2 SUBDIV_{it} + \pi_3 INTDIV_{it} + \pi_4 INCOME_{it} + \pi_5 SECDIV_{it} + \epsilon_{it} \dots\dots 2$$

Equation 1 is the linear regression model that was used in testing the null hypotheses.

Where:

- ROI = Return on Investment
- PRODIV = Product Diversification
- SUBDIV = Subsidiary Non-current asset
- INTDIV = International Diversification
- INCOME = Income Diversification
- SECDIV = Sector Diversification

- $\pi_0$  = Constant;
- $\pi_1 \dots \pi_5$  = is the coefficient of the regression equation.
- e = Error term;
- i = is the cross section firms used;
- t = is years.

**Interaction Model**

*Dual diversification strategy model*

$$ROI = f( PRODIV * INTDIV , PRODIV * INCOME , PRODIV * SUBDIV , PRODIV * INTDIV ) \dots\dots 3$$

The study intends to use product diversification as a base, as the entire firms are involved in production of one product or the other; hence product is peculiar to all the firms. The above model will be used to examine the best combination of diversification strategy that drives the performance of the firm.

#### 4.0 Data Presentation

The data used for the study is presented under table one in the appendix. This study used panel data and adopted the panel regression analysis to identify the possible effects of diversification on the performance of quoted diversified companies in Nigeria. The study also conducted some preliminary analysis such as descriptive statistics, correction analysis to ascertain the normality of the data and check for the presence of multi-co linearity.

#### Descriptive Statistics

The descriptive statistics result shows the mean (average) for each of the variables, their maximum values, minimum values, standard deviation and the Jarque-Bera (JB) statistics (normality test).

Table 4.1 below, is the descriptive statistics result of the data covering the period of ten years (2013 – 2022) of the quoted diversified companies used for study.

**Table 4.1 Descriptive Statistics**

	ROI	INCOME	SECDIV	PRODIV	INTDIV	SUBDIV
Mean	1.033667	0.350000	3.516667	6.250000	0.500000	0.564500
Median	0.910000	0.000000	3.000000	6.000000	0.500000	0.575000
Maximum	1.950000	1.000000	5.000000	10.00000	1.000000	0.950000
Minimum	0.460000	0.000000	2.000000	4.000000	0.000000	0.270000
Std. Dev.	0.380673	0.480995	0.911167	1.927719	0.504219	0.124743
Skewness	0.828216	0.628971	0.153655	0.514476	0.000000	0.133925
Kurtosis	2.560432	1.395604	2.205957	1.988230	1.000000	3.564310
Jarque-Bera	7.342468	10.39126	1.812362	5.206057	10.00000	8.975474

Probability	0.025445	0.005541	0.404064	0.074049	0.006738	0.009014
Sum	62.02000	21.00000	211.0000	375.0000	30.00000	33.87000
Sum Sq. Dev.	8.549793	13.65000	48.98333	219.2500	15.00000	0.918085
Observation	60	60	60	60	60	60

Source: Researcher's Computation (2022).

The result reveals that some diversified companies in Nigeria perform better than others within the period of the study. The mean value of performance within the period is 1.03, maximum value of 1.95 and minimum value of 0.46. This means that on the average diversified firms in Nigeria perform high. The difference between the mean, maximum and minimum value are, indicates that the only few firms perform highly, majority of the firms perform below the average. The Jarque-Bera and its probability show that the performance of the firms over the period is normally distributed.

The result of Subsidiary diversification shows a mean value of 0.56, maximum value of 0.95 and minimum value of 0.27. These values reveal that most diversified firms in Nigeria have most of their investment in subsidiary than in the parent company. They make more investment in assets in their subsidiaries than they make in the parent company. While some make huge investment in their subsidiaries, some make little investment (below the average) in their subsidiary. The Jarque Bera statistics and its probability value of 0.009 shows that the subsidiary diversification is normally distributed. International diversification, the result shows that on the average, diversified firms in Nigeria involved in international activities. Though the level differs, however, about 50% of them engage in international activities, while the other 50% does not engage in international activities.

The result of product diversification shows that almost all the diversified firms in Nigeria have on the average about 6 products. Some maintain high number of product line (10), while some maintain minimum number of products 4. The difference between the maximum and minimum number of product line maintain by the firms shows that only few of them have product line above the average number of product(6).

The result of sector diversification also shows the means Value of 4 (3.5), maximum value of (5) and minimum value of 2. This reveals that diversified firms in Nigeria have their presence in about 4 sectors on the average, some in 5 sectors while some in 2 sectors only. This shows the level of spread of those firms. This also reveals that those firms have subsidiary in different sectors.

However, there are some that diversified more within the same sector. The normality result shows that sector diversification is not normally distributed.

Income diversification, the result shows that most of the firms are also income diversified. They carry out other activities and operation that generate income to the firm other than their usual or main business line. The normality shows that income diversification is normally distributed at 1% level.

### Correlation Analysis.

In examining the relationship that exist among the variables and check for the presence of multi-co linearity, the study employed the Pearson correlation coefficient and the results are presented in table 4.2

Table 4.2 Pearson Correlation coefficient analysis

	ROI	INCOME	SECDIV	PRODIV	INTDIV	SUBDIV
ROI	1.000000					
INCOME	0.133574	1.000000				
SECDIV	-0.169741	-0.264911	1.000000			
PRODIV	0.317235	0.525535	-0.470414	1.000000		
INTDIV	0.224290	0.454257	-0.719391	0.710844	1.000000	
SUBDIV	-0.071596	-0.054943	0.052266	-0.152773	-0.200756	1.000000

Source: e-view correlation analysis result 2022

The result shows that firm performance has negative relationship with sector diversification and subsidiary diversification, this relationship reveals that increasing sector diversification and subsidiary diversification will lead to low firm performance. The result shows the more a firm increases its presence in many more sector, the lower its performance tends to be. Firm performance has positive relationships with income diversification, international diversification and product diversification. The positive relationship reveals that an increase or decrease in income diversification, international diversification and product diversification will have increase on decrease firm performance among diversified firms in Nigeria. Thus income diversification, international diversification and product diversification has positive relationship with firm performance.

From the result, the study observed that no two of the variables used were perfectly related (above 75%). This indicates the absent of multi-co linearity in our model.

### Regression analysis

This study adopted the panel regressions analysis to identify the possible effects of diversification on the performance of quoted diversified companies in Nigeria. However, due to the heterogeneity nature of the panel data, the study used the Hausman effect test to test its effect on the data.

### Current performance Model

#### Fixed and Random Effect Test

The summary result of current performance model, Hausman effect test used by the study to select between fixed and random effect, which affect the data used in the study is presented below.

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.202854	4	0.0159

Source: Researcher summary of Hausman effect test result (2022) from e-view 10 software

The Hausman effect test result shows a chi-square value of 12.20 and probability value 0.0159, the chi-square probability value is below 10 percent. Based on the result, the study accept the fixed effect and reject the random effect, hence we use the fixed effect to correct the problem of heterogeneity in the data used for the study. Table 4.4 below is the regression result adjusted for random effect (detail of the result is presented in table 6 under the appendix).

#### Regression analysis result

Below is the analysis of effect of corporate diversification on performance. The details of the result is presented in appendix 6

Dependent Variable: ROI

Method: Panel Least Squares

Date: 02/24/24 Time: 09:33

Sample: 2013 2022

Periods included: 10

Cross-sections included: 6

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.015132	1.252711	0.810348	0.4216
INCOME	0.152585	0.203485	0.749856	0.4569
SECDIV	-0.335009	0.132362	-2.530996	0.0146

PRODIV	0.157306	0.161211	0.975778	0.3339
INTDIV	0.112159	0.048498	2.312640	0.0217
SUBDIV	0.283584	0.403006	0.703671	0.4849

#### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.687052	Mean dependent var	1.033667
Adjusted R-squared	0.558722	S.D. dependent var	0.380673
S.E. of regression	0.349158	Akaike info criterion	0.884426
Sum squared resid	6.095555	Schwarz criterion	1.233483
Log likelihood	-16.53277	Hannan-Quinn criter.	1.020961
F-statistic	2.236820	Durbin-Watson stat	1.542469
Prob(F-statistic)	0.034622		

Source: panel regression result from e-view 10

The analysis result of the current performance model shows an R-sq of 0.687 and R-sq (adj) 0.559 respectively. The R-squared adjusted value of 0.559 (55.87%) indicates that corporate diversification strategy adopted by the diversified firms in Nigeria can explain about 55.9 percent of changes in current performance of diversified companies. That is, about 55.9% changes in performance of companies can be attributable to the level of corporate diversification. Thus firms that adopt those forms of corporate diversification will tend to perform better than those that does not adopt corporate diversification strategy. The F-statistics value of 2.2, and its probability value of 0.035, shows that the regression model used is well specified and the specification is statistically significant at 5% levels. The Durbin Watson value of 1.54 reveals that there is absence of autocorrelation in our model.

### Hypothesis testing

#### H01: Product diversification has no significant effect on current performance

The analysis result of the effect of Product diversification on the firm performance shows a coefficient value of 0.157 and a P-value of 0.3339. The positive coefficient value shows that Product diversification has positive effect on the level of performance of diversified firms in Nigeria. This indicates that the more a firm diversified its product line the better it tends to perform. The probability value of 0.3339 showed that the effect of Product diversification on performance of diversified companies in Nigeria is statistically insignificant. This reveals that, though product diversification positively affects the level of performance, but the effect is not strong to drive/ cause major change in the performance of diversified firms in Nigeria.



Based on the result, the study reject the alternate hypothesis which state product diversification has significant effect on firm performance and accept the null, which states that product diversification has no significant effect on firm performance of diversified firms in Nigeria.

#### **H02: Subsidiary diversification has no significant effect on current performance**

The analysis result of the effect of subsidiary diversification on firm performance shows a coefficient value of 0.2835 and probability value of 0.4849. The coefficient value shows that subsidiary diversification has positive effect on performance of diversified firms in Nigeria. This indicates that the more a firm diversified in subsidiary line the better it tends to perform. However, the probability value of 0.4849 showed that the effect of subsidiary diversification on performance of diversified companies in Nigeria is statistically insignificant. This reveals that, though subsidiary diversification positively affects the level of performance, but the effect is not strong to drive a major change in the performance of diversified firms in Nigeria. Based on the result, the study reject the alternate hypothesis which state subsidiary diversification has significant effect on firm performance and accept the null, which states that subsidiary diversification has no significant effect on firm performance of diversified firms in Nigeria.

#### **H03: International diversification has no significant effect on current performance**

The analysis result of the effect of international diversification on firm performance shows a coefficient value of 0.1122 and probability value of 0.0217. The coefficient value shows that international diversification has positive effect on performance of diversified firms in Nigeria. This indicates that if a firm diversified into international market the better it tends to perform. The probability value of 0.0217 showed that the effect of international diversification on performance of diversified companies in Nigeria is statistically significant. This reveals that, international diversification positively affects the level of performance, and the extent of effect is strong to drive a major change in the performance of diversified firms in Nigeria. Based on the result, the study accept the alternate hypothesis which state international diversification has significant effect on firm performance and reject the null hypothesis, which states that international diversification has no significant effect on firm performance of diversified firms in Nigeria.

#### **H04: Income diversification has no significant effect on current performance**

The analysis result of the effect of income diversification on firm performance shows a coefficient value of 0.1526 and probability value of 0.4569. The coefficient value shows that income diversification has positive effect on performance of diversified firms in Nigeria. This indicates that if a firm diversified into income market the better it tends to perform. The probability value of 0.4569 showed that the effect of income diversification on performance of diversified companies in Nigeria is statistically insignificant. This reveals that, income diversification positively affects the level of performance, and the extent of effect is strong to drive a major change in the performance of diversified firms in Nigeria. Based on the result, the study reject the alternate hypothesis which state income diversification has significant effect on firm performance and accept the null hypothesis, which states that income diversification has no significant effect on firm performance of diversified firms in Nigeria.

### **H05: Sector diversification has no significant effect on current performance**

The analysis result of the effect of Sector diversification on firm performance shows a coefficient value of -0.3350 and probability value of 0.0146. The coefficient value shows that Sector diversification has negative effect on performance of diversified firms in Nigeria. This indicates that if a firm diversified into various sectors the lower it tends to perform. The probability value of 0.0146 showed that the negative effect of Sector diversification on performance of diversified companies in Nigeria is statistically significant. This reveals that, Sector diversification negatively affects the level of performance, and the extent of effect is strong to drive a major change in the performance of diversified firms in Nigeria. Based on the result, the study accept the alternate hypothesis which state Sector diversification has significant effect on firm performance and reject the null hypothesis, which states that Sector diversification has no significant effect on firm performance of diversified firms in Nigeria.

### **Discussion of findings**

The finding from the result shows that corporate diversification has positive effect on performance of diversified firms in Nigeria. Corporate diversification has about 56% effect on performance of diversified firms in Nigeria. This means that the diversification can lead to about 56% increase in the performance of diversified firms in Nigeria. The findings from the specific objectives show that:

The positive coefficient value shows that Product diversification has positive but insignificant effect on performance of diversified firms in Nigeria. This indicates that the more a firm diversified its product line the better it tends to perform. The result reveals that, though product diversification positively affects the level of performance, but the effect is not strong to drive/ cause major change in the performance of diversified firms in Nigeria. This positive effect is in line with the finding from the study of Oladele et al (2012) who found positive and significant effect relationship between product diversification and firm performance. While the study of Chang et al (2014) and Robert et al (1988) found product diversification negatively but insignificantly related with firm performance.

The study found that subsidiary diversification has positive effect on performance of diversified firms in Nigeria. This indicates that the more a firm diversified in subsidiary line the better it tends to perform. The result shows that, though subsidiary diversification positively affects the level of performance, the effect is not strong to drive a major change in the performance of diversified firms in Nigeria. The finding is in line with the finding from the study of Chun-Cheong (1998).

The study finds that international diversification has positive significant effect on performance of diversified firms in Nigeria. This indicates that if a firm diversified into international market the better it tends to perform. This indicates that international diversification positively affects the level of performance, and the extent of effect is strong to drive a major change in the performance of diversified firms in Nigeria. This finding is in line with the study of Chang et al (2014), Wei-Hwa et al (2012) but contrary to the finding of Chun-Cheong (1998).

The finding shows that income diversification has positive but insignificant effect on performance of diversified firms in Nigeria. This indicates that income diversification positively affects the level of performance, and the extent of effect is strong to drive a major change in the performance of diversified firms in Nigeria.

The study finds that sector diversification has negative significant effect on performance of diversified firms in Nigeria. The result reveals that if a firm diversified into various sectors the lower it tends to perform. This reveals that, sector diversification negatively affects the level of performance, and the extent of effect is strong to drive a major change in the performance of diversified firms in Nigeria. This finding is in line with the finding from the study of Qiming et al (2016) but contrary to the finding from the recent study of Somnath et al (2015).

### **Summary of Findings**

The study finds that corporate diversification has about 56% effect on performance of diversified firms in Nigeria. The summaries of findings from the specific objectives are as follows:

The study finds product diversification has positive but insignificant effect on performance of diversified firms in Nigeria.

The study also finds that subsidiary diversification has positive insignificant effect on performance of diversified firms in Nigeria.

The study finds that international diversification has positive significant effect on performance of diversified firms in Nigeria.

The finding shows that income diversification has positive but insignificant effect on performance of diversified firms in Nigeria.

The study finds that sector diversification has negative significant effect on performance of diversified firms in Nigeria.

### **Conclusion**

One of the characteristics of the 21<sup>st</sup> business environment is high level of competition, risk, uncertainty and ever increasing shareholder wealth maximization goal. Corporate organization to survive and compete favorably on short and long run, needs to diversify. Corporate organizations adopt diversification strategy as a means to spread risk, achieve sustained growth, competitive advantage, market leadership, and profitability. Diversification as a corporate strategy can then be a major determinant for survival of organization in a highly competitive market. The strategy can be in the form of international diversification, product line diversification, sector diversification, income diversification and subsidiary diversification. The diversification strategy have other benefits which range from cost reduction, spreading of risk, benefit of economic of scale, increase in market share, value creation, and financial performance, which come also with their associated

cost to the firm. Diversifying to achieve cost reduction, can be a viable strategy for increasing profitability of entity, through economics of scale. However, for successful diversification strategies to lead to better performance, the management must develop the technical knowhow, skill and competency required to effectively manage diversification. This study examined the extent the diversification strategy affect the level of firm diversification among firms in Nigeria. The study used international diversification, product line diversification, sector diversification, income diversification and subsidiary diversification strategy and evaluates the extent of effect they have on the performance of firms in Nigeria. The result has shown that international diversification, product diversification, income diversification and subsidiary diversification has positive effect on performance while sector diversification has negative effect on the performance of firms in Nigeria.

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**Appendix**

<b>Company</b>	<b>Years</b>	<b>ROI</b>	<b>SUBDI V</b>	<b>SECDI V</b>	<b>INCO ME</b>	<b>PRODI V</b>	<b>INTDI V</b>	<b>COUNT RY</b>
A.G. Leventis	2022	0.43	0.3	3	1	7	1	Nigeria
	2021	0.41	0.3	3	1	7	1	Nigeria
	2020	0.44	0.298	3	1	7	1	Nigeria
	2019	0.43	0.29	3	1	7	1	Nigeria
	2018	0.42	0.29	3	1	7	1	Nigeria
	2017	0.48	0.238	3	1	8	1	Nigeria
	2016	0.36	0.245	3	1	8	1	Nigeria
	2015	0.48	0.24	3	1	8	1	Nigeria
	2014	0.43	0.23	3	1	8	1	Nigeria
	2013	0.48	0.23	3	0	8	1	Nigeria
Chellarams	2022	0.53	0.259	4	1	4	0	Nigeria
	2021	0.54	0.25	4	1	4	0	Nigeria
	2020	0.50	0.225	4	1	4	0	Nigeria
	2019	0.52	0.223	4	1	4	0	Nigeria
	2018	0.53	0.216	4	1	4	0	Nigeria
	2017	0.51	0.216	4	1	4	0	Nigeria
	2016	0.24	0.216	4	0	4	0	Nigeria
	2015	0.50	0.205	4	0	5	0	Nigeria
John Holts	2022	0.53	0.25	2	1	1	1	Nigeria
	2021	0.43	0.25	2	1	4	1	Nigeria
	2020	0.43	0.23	2	1	4	1	Nigeria
	2019	0.42	0.235	2	1	4	1	Nigeria
	2018	0.40	0.263	2	1	4	1	Nigeria
	2017	0.46	0.205	2	1	4	1	Nigeria
	2016	0.44	0.22	2	1	4	1	Nigeria
	2015	0.42	0.223	2	1	4	1	Nigeria
	2014	0.4	0.2	2	0	4	1	Nigeria



SCOA	2013	0.41	0.188	2	0	1	1	Nigeria
	2022	0.47	0.353	3	1	4	0	Nigeria
	2021	0.46	0.35	3	1	6	0	Nigeria
	2020	0.48	0.351	3	1	6	0	Nigeria
	2019	0.43	0.335	3	1	6	0	Nigeria
	2018	0.44	0.334	3	1	6	0	Nigeria
	2017	0.46	0.335	3	1	6	0	Nigeria
	2016	0.46	0.335	3	1	6	0	Nigeria
	2015	0.44	0.335	3	0	5	0	Nigeria
	2014	0.48	0.305	3	0	5	0	Nigeria
TRANSCORP	2013	0.48	0.3	3	0	5	0	Nigeria
		0.53						
	2022	8	0.391	5	1	4	0	Nigeria
	2021	0.54	0.376	5	1	4	0	Nigeria
	2020	0.55	0.374	5	1	4	0	Nigeria
	2019	0.62	0.368	5	1	4	0	Nigeria
		0.52						
	2018	4	0.363	4	1	4	0	Nigeria
	2017	0.72	0.33	4	1	4	0	Nigeria
	2016	0.57	0.314	4	1	4	0	Nigeria
	0.58							
UACN	2015	9	0.305	4	1	4	0	Nigeria
	2014	0.54	0.3	4	0	4	0	Nigeria
		0.50						
	2013	4	0.285	4	0	4	0	Nigeria
		0.44						
	2022	6	0.633	2	1	10	1	Nigeria
	2021	0.42	0.63	2	1	10	1	Nigeria
	2020	0.42	0.608	2	1	10	1	Nigeria
	2019	0.41	0.602	2	1	10	1	Nigeria
		0.49						
2018	1	0.585	2	1	10	1	Nigeria	
	0.48							
2017	9	0.585	2	1	10	1	Nigeria	
2016	0.46	0.62	2	1	10	1	Nigeria	
2015	0.46	0.602	2	1	10	1	Nigeria	
	0.48							
2014	3	0.575	2	1	10	1	Nigeria	
	0.44							
2013	6	0.575	2	1	10	1	Nigeria	

**Table 4.1 Descriptive Statistics**

	ROI	INCOME	SECDIV	PRODIV	INTDIV	SUBDIV
Mean	1.033667	0.350000	3.516667	6.250000	0.500000	0.564500
Median	0.910000	0.000000	3.000000	6.000000	0.500000	0.575000
Maximum	1.950000	1.000000	5.000000	10.00000	1.000000	0.950000
Minimum	0.460000	0.000000	2.000000	4.000000	0.000000	0.270000
Std. Dev.	0.380673	0.480995	0.911167	1.927719	0.504219	0.124743
Skewness	0.828216	0.628971	0.153655	0.514476	0.000000	0.133925
Kurtosis	2.560432	1.395604	2.205957	1.988230	1.000000	3.564310
Jarque-Bera Probability	7.342468 0.025445	10.39126 0.005541	1.812362 0.404064	5.206057 0.074049	10.00000 0.006738	8.975474 0.009014
Sum	62.02000	21.00000	211.0000	375.0000	30.00000	33.87000
Sum Sq. Dev.	8.549793	13.65000	48.98333	219.2500	15.00000	0.918085
Observations	60	60	60	60	60	60

Source: Researcher's computation (2022).

**Table 3 Pearson Correlation**

	ROI	INCOME	SECDIV	PRODIV	INTDIV	SUBDIV
ROI	1.000000					
INCOME	0.133574	1.000000				
SECDIV	-0.169741	-0.264911	1.000000			
PRODIV	0.317235	0.525535	-0.470414	1.000000		
INTDIV	0.224290	0.454257	-0.719391	0.710844	1.000000	
SUBDIV	-0.071596	-0.054943	0.052266	-0.152773	-0.200756	1.000000

Source: e-view correlation analysis result 2022.

**Correlated Random Effects - Hausman Test**

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.202854	4	0.0159

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.388305	0.082929	4.682380	0.0000
DIREMU	0.302746	0.011398	1.964649	0.0525
BODSIZE	0.123555	0.001445	2.460367	0.0157
BODDUAL	0.000484	0.001232	0.393094	0.6952
GENDIV	0.000351	0.000923	0.380171	0.7047

Effects Specification

	S.D.	Rho
Cross-section random	0.039531	0.1080
Idiosyncratic random	0.113626	0.8920

Weighted Statistics

Dependent Variable: ROI  
 Method: Panel Least Squares  
 Date: 02/24/24 Time: 09:33  
 Sample: 2013 2022  
 Periods included: 10  
 Cross-sections included: 6  
 Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.015132	1.252711	0.810348	0.4216
INCOME	0.152585	0.203485	0.749856	0.4569
SECDIV	-0.335009	0.132362	-2.530996	0.0146
PRODIV	0.157306	0.161211	0.975778	0.3339
INTDIV	0.112159	0.048498	2.312640	0.0217
SUBDIV	0.283584	0.403006	0.703671	0.4849

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.687052	Mean dependent var	1.033667
Adjusted R-squared	0.558722	S.D. dependent var	0.380673
S.E. of regression	0.349158	Akaike info criterion	0.884426
Sum squared resid	6.095555	Schwarz criterion	1.233483
Log likelihood	-16.53277	Hannan-Quinn criter.	1.020961
F-statistic	2.236820	Durbin-Watson stat	1.542469
Prob(F-statistic)	0.034622		