

*Full Length Research Paper*

# **Effects of product – market diversification strategy on corporate financial performance and growth: an empirical study of some companies in Nigeria.**

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**This study takes diversification research to a new level of analysis by examining the performance of a sample of Nigerian companies in relation to specialization, related, unrelated and mixed product-market diversification strategies. It was proposed that firms that pursue related diversification strategy outperform and grow faster than those that attempt to pursue unrelated diversification strategy. It was further proposed that firms that pursue related diversification strategy exclusively will perform better than firms that pursue a mixed (i.e. related and unrelated) diversification strategy. Using the Panel Regression analytical technique involving correlation, F-statistics and descriptive statistics, the result of the Fixed Effect test showed that there is a high and positive correlation between financial performance and growth of firms and related diversification strategy. Related diversifiers had a relatively higher level of financial performance and growth than unrelated and mixed diversifiers. A marginal correlation was found between unrelated and mixed modes of diversification and financial performance and growth. The panel regression analysis showed that related diversification has a significant impact on performance ( $p < 0.05$ ) while unrelated diversification has a negative but non-significant impact on performance and growth. The result of the F-statistics showed that there were significant performance and growth differences between firms utilizing related diversification strategies and those utilizing unrelated diversification strategies ( $F = 147.4405$ ,  $p < 0.05$ ). The panel model result further confirmed that there is a significant difference between the performance and growth of firms using mixed (related and unrelated) diversification strategies and the performance and growth of firms pursuing related diversification strategy exclusively. A significant difference was also found between the performance and growth of firms that develop through unrelated diversification and the performance and growth of firms that remained specialized, with firms that remained specialized performing better on all parameters and growing faster than those that develop through unrelated diversification only. The study concludes that the financial performance and growth of firms in Nigeria are significantly affected by the mode of diversification used and recommends that Nigerian firms that are seeking a sustainable fast growth and superior performance should pursue either a related product-market diversification strategy or a specialization strategy.**

**Keywords:** Diversification, Strategy, Performance, Product-Market

## **INTRODUCTION AND PURPOSE**

The study of diversification has long attracted the interest and attention of strategic management scholars and is one of the most frequently researched areas of business (e.g. Channon, 1983; Dyas and Thanheisers, 1976; Constable, 1986; Reed and Luffman, 1986; Salter and

Weinhold, 1982). Among others, researchers have examined the antecedents of diversification and the financial performance outcomes of these strategies (e.g. Rumelt, 1974, Porter 1987; Ramanujam and Varadarajam, 1989; Elango, Ma and Pope, 2008).

Despite several attempts however, strategic management research has failed to establish a consistent and clear relationship between patterns of diversification and performance and most of such attempts are inconclusive (Johnson and Scholes, 2007) with conflicting results reported from some of the investigations. For instance, while Lei and Schmit (2009) have found that more diversified insurers have better financial performance, Hakrabarti (2007), concluded that diversification is associated with poorer performance for both affiliated firms and independent firms. Apart from the fact that the various attempts to demonstrate the effects of diversification on performance are inconclusive because of the conflicting evidence emerging from such studies, most of the investigations carried out so far are based on the experiences of companies in industrialized economies. The impact of diversification on the performance of firms in other institutional environments especially the less developed economies has not received much attention thus limiting the generalizability of findings and the development of a global theory of diversification. The extent to which firms in the less developed countries are using the diversification option, the nature of the diversification strategy they are pursuing and the extent to which such diversification moves help to improve the firms' financial performance and growth are not yet extensively explored. With particular reference to Nigeria, many firms operating in different sectors of the country's economy have sought to diversify their product-market portfolios in an effort to spread the risks of their businesses, improve their performance and cope with the hardship and challenges of competing in a transition and deregulated economy. The outcomes of such diversification moves remain to be tested and examined empirically. Despite the assumed benefits of diversification such as the spreading of risks and cost, the advantage of synergy arising from economics of scope and the pooling and/leveraging of resources, the organizational, managerial and investment challenges of diversification appear enormous for companies in a third world nation such as Nigeria to bear. Companies in third world nations can ill afford the experiences of corporate product-market diversification failure. Thus, an empirical investigation of the performance impact of diversification strategy offers the potential benefit of adding to the existing body of knowledge on this subject in addition to generating information that can assist managers to improve policy decisions especially in the context of developing countries where resource allocation and utilization is a major challenge.

Much of the work that has been done to date on diversification and performance has largely taken the form of anecdotal reports and case study analysis. Large sample studies are needed to demonstrate how diversification strategies may or may not enhance the performance of organizations. The present study aims to bridge the gap by examining the impact of diversification

strategies on two organizational performance measures (profitability and growth) in a sample of 48 large scale companies in Nigeria. Besides, most of the studies on this topic focus exclusively on a comparison of performance in firms that are using related diversification with those using unrelated diversification with many of such studies suggesting that performance defined in terms of profitability, growth, earnings per share, market share, etc is better in firms pursuing related diversification than in those pursuing unrelated diversification. However, empirical evidence suggests that there are several firms across many industries that simultaneously pursue a mix of (perhaps contradictory) strategies (Bowman and Ambrosini, 1997; Whittington, Pettigrew, Peck, Fenton and Conyon, 1999). Yet, it remains to be seen whether firms that pursue only related diversification strategies or unrelated diversification strategies outperform or underperform those that attempt to pursue both strategies simultaneously. This is an issue that is largely overlooked in the strategic management literature. Thus, four questions are raised in this study. The questions are:

1. Is product market diversification positively or negatively associated with growth and financial performance?
2. Does a related product market diversification strategy result in a better organizational performance than an unrelated product market diversification strategy?
3. Will firms that mix related and unrelated diversification strategies significantly underperform or outperform firms that are pursuing unrelated diversification strategies exclusively?
4. Will firms that develop through related diversification perform better and grow faster than those firms that remain specialized?

## Literature Review

One of the managerial contingencies that are assumed to be contributing positively to the economic performance of organizations is the degree of diversification (Grinyer, McKiernan and Yassai – Ardekani, 1988). According to Shin (2001), firms diversify by extending the scope of their operations into multiple markets.

A diversification strategy is pursued according to Chandler (1977), when firms have opportunities embedded in market structures and technology as well as opportunities for growth in the firm's basic business. This means that firms diversify into other businesses if after consolidating their positions in their base industry or market they still possess underutilized resources which can be applied in other sectors of low opportunity (Chandler, 1962). The assumption is that diversification may raise economic benefits through a more efficient utilization of organizational resources across multiple markets (Clarke, 1985).

A review of the literature reveals a great deal of effort

by many economics and business policy and strategy researchers to examine the impact of product-market diversification strategy on the corporate performance of firms (e.g. Rumelt, 1974, 1982; Caves, Porter, Spence and Scott, 1980; Lecraw 1984; Montgomery 1985, 1994; Pelepu 1985; Grinyer et. al; 1988; Montgomery and Wernerfelt, 1988; Wernerfelt and Montgomery, 1988).

Early research (Rumelt, 1974) suggested that firms which developed through related diversification outperformed both those that remained specialized and those which developed through unrelated diversification. These findings were later questioned (Montgomery, 1982). The results of empirical studies linking patterns of diversification to financial performance remain unclear. Some of the specific evidence available from the research on diversification shows that profitability increases with diversity but only up to the limit of complexity (Grant, Jammine and Thomas, 1988). Results from other studies suggest that the management of the process of diversification may be a more important influence on performance than the type or mode of diversification itself (Varaderajam and Ramanujam, 1987). For instance, Nesbit and King (1989) examined the progress of 1800 US companies between 1978 and 1988 and concluded that corporate performance is dependent on strategy implementation rather than the strategy itself.

From a review of the literature, it is clear that a universal prescription of the benefits of diversification may be unlikely to be found. From a contingency perspective, the likely success or otherwise of diversification may be greatly dependent and determined by the circumstances of an organization such as the level of industry growth, market structure, the firm size, the resource situation of the organization and the firm's institutional environment. It has been found for example that underutilization of physical resources or intangible resources such as brand name is likely to encourage related diversification whereas excess financial resources may well predispose an organization to pursue unrelated diversification (Chartejee and Wernerfelt, 1991).

The general conclusion from these previous studies is that diversification improves corporate performance although unrelated diversification is negatively correlated with firm performance (Grinyer, et. al; 1988). Firms pursuing related diversification built around firms' strengths in their basic activities have been found to be generally more profitable and more successful than firms that pursue a strategy of unrelated diversification. Empirical research indicates that the most profitable firms are those that have diversified around a set of core resources and capabilities that are specialized enough to confer a meaningful competitive advantage in an attractive industry, yet adaptable enough to be advantageously applied across several others (Collins and Montgomery, 1997; McKinsey, 2001a; and McKinsey, 2001b). The least profitable are broadly

diversified firms whose strategies are built around very general resources (e.g. money) that are applied in a wide variety of industries but are seldom instrumental to competitive advantage in those settings (ibid). Wernerfelt and Montgomery (1988) explain the differences in performance by pointing to the increased efficiency firms realize from transferring and leveraging competencies to widely varying markets. Unrelated diversification may increase market related risks, but it can achieve efficient capital management. On the other hand, related diversification can lead to higher corporate performance when compared to unrelated diversification. According to Hill (1994), by pursuing a strategy of related diversification, firms can focus on core organizational capabilities and exploit the interrelationships between business lines to achieve economies of scope by sharing physical business resources and economies of scale through increased coordination and the sharing of marketing, information and technological know how and capabilities across related industries all of which result in lower production, selling, servicing and distribution costs, better market coverage, stronger brand image and company reputation and lower order processing costs.

## Theoretical Background

### The Concept and Theory of Diversification

The literature mentions different types of strategies at the corporate level that take into account different directions and types of corporate development (Grant 2005; Mintzberg, Ahlstrand and Lampel 2009; Rue and Holland, 1989). Among them are concentration and diversification strategies. Concentration strategy is a grand strategy in which a firm directs its resources to the profitable growth of a single business or product in a single market, with a single dominant technology (Pearce and Robinson, 2007). This strategy involves focusing on doing better what a company is already doing well by using existing strengths in new and productive ways without taking the risk of great shifts in direction. On the other hand, diversification is the strategy whereby a company sets up or acquires businesses outside its current products and markets (Kotler and Armstrong, 2008).

The literature on diversification suggests both efficiency and agency rationales for diversification. In the agency or "managerial attachment" view, managers diversify, especially by acquisition, primarily to increase their compensation, job security, or span of control (Amihud and Baruch, 1981; Born, Eisenbeis, and Harris, 1988). In the efficiency view, product and market diversification allows firms to reduce firm specific risk by holding a greater variety of services (Saunders, Strock and Travlos, 1990). However, risk reduction is not a satisfactory efficiency rationale for diversification. Shareholders in

publicly traded firms can always reduce their risk by holding a diversified portfolio of non-diversified firms, gaining the risk reduction advantages of diversification without incurring the costs of managing a large organization. For this reason, diversification would be beneficial only if it provides some kind of economies of scope that support growth and better performance.

Economic theory proposes that a firm is a collection of physical, human and intangible resources put together for the performance of many separate activities. Some resources may be relatively product – specific. They are thus utilized to produce a particular good or service through one business line. However, other resources may have the potential to increase production of goods or services in multiple business lines. If such resources are insufficiently utilized in the firm's current operations, then it may be worthwhile to expand their use. In this case, the firm will use the resources by diversifying its operations into multiple markets (Caves, et. al., 1980; Clarke 1985).

A firm can diversify its operations into related markets in order to achieve economic benefits by sharing human and physical resources across markets. A firm can also diversify its operations into unrelated markets in order to realize economic benefits from the exploitation of an internal capital market (Shin, 2001). This is possible because capital can be more efficiently allocated in an internal market than in external markets (ibid).

## Hypotheses

### Hypothesized Relationship Between Mode of Diversification and Performance

The literature suggests that the mode of diversification is related to performance. Rumelt (1974), Collins and Montgomery (1997) and McKinsey (2001b) for example argue that profitability is positively related to the use of common core skills. This explained the low profitability of 'unrelated' businesses which they found in their studies with the relationship becoming more continuous once industry effects are taken into account. This supports the view that the degree of relatedness of business activities is a reflection of exploitation of particular capital, human or other assets which give the company what Bain (1956) has called absolute cost advantages. This thesis suggests that the higher the degree of relatedness of business activities, the higher the chances of a company to make more profits. This is the first hypothesis to be tested in this study.

### Hypothesized

### Relationship Between Mode of Diversification and Growth

Diversification has been perceived as the expansion path

for large companies (Penrose, 1963; Marris, 1964; Hill and Jones, 2007; Thompson and Strickland, 2008). However, diversification into unrelated business is not a pre-requisite for growth. According to Grinyer, et al., (1988) expansion is still possible in single dominant or related businesses which may be more profitable and so grow faster than unrelated ones. In general however and on the basis of previous studies, a positive correlation between diversification, whether related or unrelated, and growth may be hypothesized. In other words, diversification is positively associated with growth although growth in related businesses is faster than in unrelated diversified ones.

## Operationalisation and Measurement of Variables

### Diversification

A review of the literature reveals a great deal of variation in the way the extent of diversification is conceptualized, defined, and measured. Ramanujam and Varadarajam (1989) identify at least sixty different taxonomies which have been developed to classify business organizations according to extent of diversification.

The best known typology, particularly in its organizational performance applications, is that developed by Rumelt (1974, 1977). In the Rumelt framework, extent of diversification is defined according to a fourfold taxonomy based on percent of revenue derived from various products. These include single-product firms, dominant-product firms, related product firms and unrelated product firms. The two types of diversification strategies that are of interest to us in this study are related – product diversification and unrelated - product diversification. Related diversification is development beyond the present product and market, but still within the broad confines of the industry (i.e. value chain) in which the company operates. Unrelated diversification occurs where the organization moves beyond the confines of its current industry.

According to Rumelt (1977), related – product firms derive less than 70 percent of their revenues from a single product domain and the remainder of their revenues is from a related product domain. These firms are characterized by medium heterogeneity of customers, some product similarity, medium unit interdependence, both internal and external acquisitive diversification modes and a fast rate of diversification growth. Unrelated product firms receive less than 70 percent of their revenues from a single-product domain and the remainder of their revenues from an unrelated – product domain. These companies are characterized by a high heterogeneity of customers, little or no product similarities, low unit interdependence, an acquisitive diversification mode, and a fast rate of diversification growth (Rumelt, 1977). When a firm earns more than 30

**Table 1.** Characteristics of the sampled firms

Description: Type of Strategy used	No of entities	
	N	%
Specialization	18	37.5
Related Diversification	13	27.1
Unrelated Diversification	17	35.4
Total	48	100

**Source:** Own Survey (2010-2011)

percent of its sales revenue outside a dominant business, and when its businesses are related to each other in some manner, the company is classified as a related diversified firm.

Following Rumelt (1974), we define in this study, a single specialized business to mean a company that derives more than 95% of its revenues from a single business while a related diversified business is defined as a company that derives less than 70% of its revenues from a dominant business with all the businesses in the portfolio sharing product, technological and distribution linkages. An unrelated diversified business is defined here as a company that derives less than 70% of its revenue from its dominant business with the businesses having no common links between them.

Four types of firms, (i) single, specialized business, (ii) related diversified (iii) unrelated diversified, and (iv) mixed strategies were identified using cluster analysis based upon the emphasis that a company placed upon different types of diversification. All the 48 manufacturing firms used are publicly quoted on the Nigerian Stock Exchange (NSE) and they represented different industries. The industries covered are food and beverages processing, building materials, machinery and equipment, textiles, plastics, publishing, breweries and the pharmaceutical industry. The studied firms were selected according to the following criteria: production/manufacturing activity, publicly quoted on the NSE, employing over 250 persons within the last five years, realization of the growth strategy reflected in substantial expansiveness such as entry into new markets and diversification of production and investment activities. The characteristics of the studied firms are presented in Table I.

In terms of growth direction, the strategy of specialization (concentration on one business) was pursued by 18 firms (37.5% of total number of firms), related diversification strategy by 13 firms (27.1%) and unrelated conglomerate diversification by 17 firms (35.4%).

The different types of diversification were chosen based on a review of the literature and previous conceptualizations (e.g. Rumelt, 1974). Two diversification indexes used in previous research are employed in this study to capture different aspects of diversification: the Entropy index (Jacquemin and Berry,

1979), and the concentric index (Caves, et al. 1980; Montgomery and Wernerfelt 1988). The Entropy index distinguishes between related and unrelated diversification.

The three separate sales – weighted entropy indexes (total diversification, related diversification and unrelated diversification) were obtained directly from the companies. The total diversification index is a weighted average of the sales shares of a company in different industries. Related diversification measures the extent of diversification arising from operations in several industries of the same industry group. Unrelated diversification measures the extent of diversification arising from extending operations into different industries. The sum of related diversification and unrelated diversification is a measure of total diversification. The concentric index measures the degree of distance or relatedness between industries. The weight for a company is given based on industry sales shares. The weight is zero if a company's operations are in four different SIC code industries or more, the weight is one if the firm's operations are in three different SIC code industries, and two if they are in two different SIC code industries.

## Performance

Performance was assessed using four financial performance ratios i.e. ROE, ROA, sales growth, and profit margin. These measures had been used in previous studies by Rumelt (1987), and Lusch and Brown (1996). Our use of more than one measure of performance is in consonance with past research that has advocated the use of multiple rather than single measures of organizational performance (Naman and Slevin, 1993; Signaw, Simpson and Baker, 1998).

## METHOD OF DATA COLLECTION AND ANALYSIS

### Sample and Data Collection

Questionnaires were distributed to top level managers in the 48 companies used made up of 18 specialized, 13 related and 17 unrelated firms. The firms were selected

**Table 2.** Mean standard deviations correlation matrix

Table 2.		M	SD	1	2	3	4	5	6	7	8
1.	PM	4.32	0.321	-							
2.	ROE	3.76	0.623	0.06	-						
3.	ROA	3.57	0.693	0.88**	0.25	-					
4.	G sales	3.33	0.519	0.36	0.64**	0.33**	-				
5.	Specialized	3.12	0.744	0.45	0.45**	0.48**	0.33**	-			
6.	Related	4.78	0.297	0.89**	0.65**	0.78**	0.62**	0.17	-		
7.	Unrelated		3.74	0.552	0.20	0.08	0.03	0.05	0.24	0.49**	-
8.	Mixed Diver	3.63	0.575	0.05	0.04	0.28	0.02	0.30*	0.08	0.02	-

\* P &lt; 0.05

\*\* P &lt; 0.01

using a convenience sampling method from a list of companies maintained by the Nigerian Stock Exchange (NSE). The questionnaire was used to obtain information about the strategic direction of the firms and to measure the extent and nature of their diversification strategies.

The questionnaire instructed the key informants to focus on recent strategic diversification decisions in their organizations. This request was made because a recent incident is more salient and provides clarity. The subjects were asked to focus on strategic diversification rather than operational routine maintenance decisions. Informant competence was evaluated along three criteria. All the key informants included in this study were expected to be General Manager/CEO or persons indicated by these representatives, engage in top management strategic planning to a considerable extent, and have not less than five years of length of service with the target organization. Criteria similar to these had been used in related previous studies by Day and Nedungadi (1994) and Menon, Bharadwaj, Adidam and Edison, (1999). The questionnaires were distributed in Lagos, Ibadan, Kano, Kaduna and Enugu in October and November, 2010 with follow up visits to some of the companies in Lagos, Ibadan and Kaduna in December 2010 and January, 2011. Of the 398 surveys distributed, 257 were returned from all the 48 companies. Based on the eligibility criteria stated above, 26 respondents were deemed unqualified and removed from the study leaving a usable response rate of 89.9%. The remaining 231 responses were used to assess the measures and propositions. Financial performance data on ROE, ROA and Profit margin were obtained from the published financial statements of the firms. Data on sales growth were obtained from the sales record of the firms.

### Analytical Procedure

The combined data set for five years (2006 – 2010) were analyzed using Panel Data Regression Analysis. It is a form of multiple regressions that treats the parallel temporal effects and individual effects (Kremp et al (1999). This technique takes into account individual heterogeneity, which is not possible with other estimation

techniques. To analyze the relationship between diversification and performance the combined five year sample was divided into four groups of the differing numbers based on the type of diversification. Then Panel Regressions were run for the four groups (specialized, related, unrelated and mixed).

### Model Specification

The paper used Panel Data Regression Analysis using Fixed Effect Model to investigate the effects of product – market diversification strategy on corporate financial performance and growth in Nigeria. Fixed effect model assumes firm specific intercept which captures the effects of those variables that are particular to each firm and that are constant over time. Thus, the model can be written as follows:

$$PERFit = \alpha_0 + \alpha_1 DIVit + \mu it$$

Where

PERFit = ROE, ROA, sales growth, and profit margin of the firm i at time t

DIVit = Diversification index (Entropy and Concentric) of firm i at t

$\mu$  = stochastic error term

i = cross section dimension and ranges from 1 to N

t = Time series dimension and ranges from 1 to T

$\alpha_0$  and  $\alpha_1$  are the constant and parameter estimated respectively.

The explanatory variable in the model is expected to impact positively on the dependent variables which are financial performance and growth. Hence, the following apriori expectation exists,  $\alpha_1 > 0$ .

## EMPIRICAL RESULTS AND DISCUSSION OF FINDINGS

### Descriptive Statistics

The means, standard deviations, and correlation coefficients are reported in Table 2. Based on Table 2, related diversified firms had a relatively high mean (m = 0.25). The mean scores of profit margin (PM), return on

**TABLE 3.** Fixed Effect Results of Effects of Product–Market Diversification Strategy on Corporate Financial Performance and Growth with 192 firms Year Observation

Dependent Variable	Financial Performance	Growth of sales
	(Coefficients)	(Coefficients)
<b>Regression Model</b>	<b>Fixed Effect</b>	
<b>Independent Variable</b>		
<b>Constant</b>	0.119 (0.000) **	
<b>SPECIALIZED</b>	0.2443 (0.000)**	0.9261 (0.000)**
<b>RELATED</b>	0.6127 (0.001)**	0.7214 (0.000)**
<b>UNRELATED</b>	-0.1329 (0.967)	-2.2384 (0.995)
<b>MIXED</b>	0.0061 (0.071)*	0.0286 (0.036)*
<b>Hausman</b>	19.721 (0.000)**	16.685 (0.000)**

\*Denotes significant at 10% \*\*Denotes significant at 5 %, Figures in parentheses is p values.

asset (ROA), return of equity (ROE) and sales growth (Gsales) were 4.32, 3.76, 3.57, and 3.33 respectively. Generally, the mean index of financial performance is 3.88. Based on Table 2, result of paired-wise correlation shows that there is a high and positive correlation between financial performance and related diversified firms (RDF). For instance, the correlations between ROA, ROE, and PM were 0.78, 0.69, and 0.89 respectively. Correlation between GSales and related diversified firms is 0.62 ( $p < 0.05$ ). However, there were marginal correlation between other modes of diversification and financial performance and sales growth (see Table 2). Also, the results reveal no problem of multicollinearity in the data. The pair-wise correlation among the explanatory variables are below 0.80 (Gujarati, 2004).

### Fixed Effect Analysis

One of the limitations of Pearson Correlation is that it does not allow the identification of causes from consequences. The paper used Panel data analysis model (Fixed Effects) to identify the the effects of product – market diversification strategy on corporate financial performance and growth in Nigeria. The Hausman specification test revealed that fixed effect model is suitable for the data used for estimation. Accordingly the paper employed fixed effect model to capture the effect of various diversification indices on profitability and growth. The results are reported in Table 3.

The fixed effect assumes a different intercept for all the groups of firms but a constant slope coefficient for all the groups. These differences in the intercept may be due to the unique features of each group of firms such as management style, information technology, organizational structure, products or management talent.

The effect results pertaining to both financial performance and sales growth revealed that related diversification has a significant impact on financial performance (0.6127;  $p < 0.05$ ) and sales growth (0.7214;

$p < 0.05$ ) while unrelated diversification has a negative non-significant impact on performance (-0.1329;  $p > 0.05$ ) and growth (-2.2384;  $p > 0.05$ ). This suggests that the related diversification firms were able to get better financial performance (i.e. PM, ROA, ROE) and sales growth than unrelated diversification firms during this time period. This answered the first and second research questions. Also, the result affirmed that firms that develop through related diversification perform better and grow faster than those firms that remain specialized (i.e. research questions three). The results of this study support the hypothesis stating that related product-market diversification strategy would lead to a higher organizational performance than unrelated product-market diversification strategy. This supports the findings of the ealier study of Rulmet (1974, 1982). Rumelt (1974,1982) found that related diversification will lead to superior levels of performance while unrelated diversification will lead to inferior levels of performance. Salter and Weinhold (1979) note that unrelated diversification does not lead to higher corporate returns. This is also in line with the absolute cost advantage theory which states that the degree of relatedness of business activities is a reflection of the exploitation of particular capital, human or other assets.

The specialized and mixed diversification firms coefficients report positive and marginal effect on financial performance and sales growth (see table 3). The results indicate that firms that remained specialized on their core business primarily will perform better and grow faster. Markides (1992) provides a helpful review of the argument supporting this finding. He states that as a firm increases in diversification, it moves further away from its core business, and the benefit of diversification declines. Also, mixed diversification strategy haa a positive effect on financial performance and sales growth with 10% statistical significance. The positive coefficient of mixed diversification strategies answered the fourth requestions that mix related and unrelated diversification strategies significantly outperform firms that are pursuing

unrelated diversification strategies exclusively. This is similar to the research findings of Lubatkin and Chatterjee (1994). The constant of the model reveals that it is significant.

The R-squared value is 0.888519, meaning that about 89 percent total variation in financial performance and sales growth is accounted for by diversification strategies adopted by the firms, while less than 11 percent is accounted for by the stochastic error term or variables excluded from the model. The F-statistic is on a high side with a value of 147.4405 and a P-value of 0.00000 indicating that all the parameters are statistically significant. This is in line with the static trade-off theory. The Durbin-Watson statistic value is 1.338274. By comparing this value on the Durbin-Watson Statistical table, it was detected that there is a slight positive autocorrelation in the data which could be due to specification of errors.

### Implications of findings for policy and theory

The results of this study imply that diversified firms in Nigeria that seek a sustainable fast growth and superior performance should review their strategies and refocus their strengths and resources on a specialized product or in the alternative pursue a strategy of related product diversification.

The result also shows that, specialization and related diversification are more successful in Nigeria, an economy that is characterized by several elements of a society in transition. Theoretically therefore, the effectiveness of a diversification strategy may be related to the nature of the institutional environment of a firm.

By making use of Panel Regression Technique, the study has moved research in diversification strategy to a new level of analysis.

### CONCLUSION

On the basis of the results of this study, we may conclude that the financial performance and sales growth of firms in Nigeria are affected by the mode of diversification used. Because there was a high, positive and statistically significant correlation between financial performance and sales growth and related diversification and significant differences in performance between the firms utilizing only related diversification and those utilizing only unrelated diversification and mixed strategies in favour of related diversifiers, it may be concluded that related diversification is better than unrelated diversification and a mixed strategy in a developing economy like Nigeria.

### Limitations and suggestions for future research

Conducting a research on diversification and performance in Nigeria is particularly difficult because of problems with data availability. Any attempt to study the change in a company's performance before and after a diversification move requires several years of data to ensure that longer-term effects are captured and studied once any teething problems of implementation are overcome. Another problem with this study is that the comparison of the performance and growth of the sampled companies that we classified as specialized, related, unrelated and mixed, might be affected by the performance and growth of firms which might have changed category in the course of the study as a result of the strategies they follow. Therefore, more research is needed on this subject. Such future studies can include more companies and cover several years of data to ensure that original sample is adequate at the time of data analysis despite the change in diversification category by firms. This will ensure that longer-term effects are studied.

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