VERTICAL DIVERSIFICATION AND ORGANIZATIONAL COMPETITIVENESS OF MANUFACTURING COMPANIES IN SOUTH EAST, NIGERIA

Ike, Ijeoma Chidinma, PhD and Uzodinma, Amara Celestina
[1,2]*School of Business Education, Federal College of Education (Technical), Umunze, Anambra State*

Abstract
This study examined the nexusbetween vertical integration (backward and forward) and organizational competitiveness with reference to listed manufacturing firms in South-East, Nigeria. Descriptive survey research design wasadopted. The population of study comprised of 594 (managers, supervisors and administrative) staff of listed manufacturing firms in South-East, Nigeria. A sample size of two hundred and thirty-nine (239) was drawn from the population using Taro Yamene formula while stratified proportionate random sampling technique was used for the sample unit. Two hundred and fifteen (215) copies of questionnaire retrieved were completely filled and used for the study. The Spearman Rank Correlation (rho) was used to ascertain the relationship between vertical integration and organizational competitiveness. The result of the bivariate analysis reveals that backwardintegration and forward integration had a significant positive relationship with the organizational competitiveness. The findings led to the conclusion that verticalintegration is imperative in improving the competitiveness of manufacturing firms in Nigeria, South-East. The study recommends among other things, that manufacturing companies should integrate backwardly as to control the quality of their input and products, also forwardly as to get first-hand information from end users for taking informed decision that will enhance their competitiveness.
Key words: *vertical integration, backward, forward, organizational competitiveness*

Introduction

Manufacturing industry plays catalytic role in a modern economy and has many dynamic benefits that are crucial for economic development and transformation (Opaluwa, Umeh & Ameh, 2010) in (Olowu, et al, 2023). It contributes to the Gross Domestic Product (GDP) of a country (Muhammad, 2019), may be one of the highest employer of labour due to series of activities it engages upon. Behun, et al (2018) notedthat the Industry accounts for a major part of the European economy, generating 24% of GDP and employing up to 50 million people, representing one out of five jobs in the EU. The manufacturing industry forms the basis of many national economies, which is reflected in its high share of total output, employment and revenues, and in the creation of sustainable economic growth (Herman, 2015).

However, this sector of the Nigeria economy is facing great challenges from both internal and external business environments' owning to the volatility of the

environment it operates. For instance, the increasing demand for foreign currencies for importation of raw materials and lackadaisical attitude of the intermediaries, incursion of new market entrants' especially foreign investors into the manufacturing industry also change in taste and preference, have called for the attention of firms and investors to come up with strategies on how best to achieve customer satisfaction through provision of quality product (Haim, 2015; Hanafi, et al, 2018; Marangu, et al, 2014). Similarly, there is also an urgent need for growth through vertical integration as to improve the competitiveness of manufacturingfirms. Baum,et al(2012) believe that companies today operate in an increasingly dynamic and challenging environment; organizations must be able to act quickly in response to opportunities and barriers. To cushion the effects of these challenges, manufacturing firms must strategize on how to succeed and grow their businesses. Moreover, Mayila, et al (2017) stated that Companies must develop a highly detailed understanding of specific emerging markets, as well as the needs of their existing customers. They further suggest that manufacturing firms will also require agile approaches to the development of strategy—using scenario planning rather than point forecasts, they gave instance of firm making big bets on long-range opportunities, such as tapping new markets in developing economies or switching to new materials, but must do so in ways that minimize risk.

The ability of manufacturing companies to overcome relies on the competitive strength of a firm (Barney, 2017). Porter (2016) asserts that business succeed when they possess some advantages relatively higher to their competitors. African Development Indicators (2013) suggest that the potential for edging and achieving sustainable competitiveness in a relatively dynamic, complex and uncertain business industry is based on two premises and advantages: cost advantage and resource advantage. According to Pearce and Robinson (2018), a scheme developed by Michael Porter, for a firm thatseeks to build competitive advantage, it should strive for overall low-cost leadership in the industry, the firm should be able to use its low cost advantage to charge lower prices and yet enjoy higher profit margins.Organizations may also need to improve on their product quality, channel of distribution, delivering of service above expectations of the customers for competitive edge over others in the industry.

Furthermore, with the amplified change in competition, globalization and economic-political environment; firms are bound to think outside the box of the strategies that can aid in achieving corporate competitiveness for sustainable growth. In quest to attain and sustain this competitive advantage, manufacturing firms may require to follow different strategic directions.A strategy of a corporation forms a comprehensive master plan stating how the corporation will achieve its mission and objectives (Wheeller & Hunger, 2014).This corporate strategy maximizes competitive advantage and minimizes competitive disadvantage. Diversification is one of the corporate strategy that canensure growth

of anorganization.Diversification is developing a wide range of products, interests or skills in order to be more successful or reducerisks (Nickels, 2012).Manufacturing firm can diversify vertically, when it takes over a function previously provided by a supplier or distributor (Wheeller & Hunger, 2014). In agreement to this, Abuh and Echechukwu (2020) affirmed that vertical diversification occurs when the firms go back to previous stages of their production cycle and therefore get forward to other stages of similar cycle of production of raw materials or distribution of the final product. In other words, it entails expanding in a backward or forward direction along the production chain of a product. Some manufacturing firms in Nigeria have keyed into this form of diversification by sourcing their raw material or reaching out to their customer (retailers and end users). Backward integration may facilitate timely supply of raw material and assures the quality of same.Again, two most celebrated works, Desai (1981) and Ahluwalia (1985) observed that backward integration leans more towards import substitution strategy than exports promotionwhich invariably reduces pressure on the limited foreign exchange available. Coscharis group, Dangote sugar Plc, BUA cement, Lafarge cement and host of others are into backward integration. On the other hand, forward integration ensures prompt delivery of goods to the consumers, ensures offering of optimal price by removing profit of the intermediaries (Pearce & Robison, 2010), and enhances quality of the product (Barney, 2017).

Diversification enhances organizational competitiveness hence Marangu, et al (2014) argued that as more diversified firm is, more competitive advantage it possesses and can survive the stiff competition in the industry.A firm is said to be competitive over rivals when it is able to create more economic value than other competingfirms (Barney, 2017). Economic value is the difference between perceived benefits gained by a customer thatpurchases a firm's product or service and the full economic cost of these products and services. In the light of the fore going, this paper intends to examine the extent backward and forward integration relate with the competitiveness ofselected listed manufacturing companies in south east Nigeria.

Manufacturing sector in Nigeria isbeing choked with lots of challenges emerging from both internal and external environment of the industry. They include scarcity of foreign currency, unhealthy competition, customers' preference, intermediaries'sharp practices,high cost of custom duties for importation of raw materials used in localproduction, continuous fall of the naira against the dollar, corruption, poor management,production of fake products, and lots more thatlargely erode the competitiveness of the industry in the regional markets and Nigeria at large (Oloda,2017, Ohimain, 2014 and Olannewahu, 2016).These conditions have significantly constrained capacity utilization in the manufacturing industries in Nigeria (Anyanwu, 2020).Hence, their competitiveness and eventual

growth is like a hurricane task to most of them leading to closure of some of the firms.

A lots of studies have been carried out to ascertain the effect of backward and forward integration onmanufacturing firms but there are still unsolved questions about its relationship in regards to organizational competiveness, particularly when it comes to certain publicly traded manufacturing enterprises in Nigeria's south east states. For instance,Scholars like Desai (1981)Oji, et al (2014); Marangu, et al (2014); Oloda (2017); Muculloch, et al (2017)Kaiser and Obermaier (2020) haveexamined criticallybackwardand forward integration and their connectionon various parameters. Yet there are inconsistency on the results obtained hence this study intends to explore the extent backward and forward integration relate with the competitiveness of listed manufacturing companies in south east, Nigeria.

The broad objective of this study is to investigate the nexus between vertical diversification strategy and competitiveness of listed manufacturing companies in South East, Nigeria. The specific objectives are to:

1. analyze the extent to which backwardintegration links with thecompetitiveness of listed manufacturing companies;
2. evaluate the extent to which forwardintegration relates with the competitiveness of listed manufacturing companies.

The following research questions were posed to address the study objectives:

1. What is the extent to which backwardintegration relates with competitiveness of listed manufacturing companies?
2. Towhat extent doesForwardintegrationrelates with competitiveness of listed manufacturing companies?

H_{o1}: There is no significant relationship between backwardintegration and the competitiveness of listed manufacturing companies in south east, Nigeria.
H_{o2}: Forwardintegration has no significant relationship withthe competitiveness of listed manufacturing companies in south east, Nigeria.

This research centers on examining the extent of effect vertical diversification has on competitiveness of four listed manufacturing companies in South East of Nigeria.The content scope cut across two dimensions of vertical diversification which include, backward and forward integration and organizational competitiveness. The geographical spread of the study is the manufacturing firms in South East states of Nigeria namely: Abia, Anambra, Ebonyi, Enugu and Imo. However, the scope covers only four listed manufacturing companies that have diversified and their plants are located at south east of Nigeria. They include: PZ Cusson Nig PLC, Aba,Abia, Nigerian Breweries (NB) PLC, Ama, Enugu;Guinness

Nig PLC, Aba, Abia; Cutix PLC.Nnewi,Anambra. The unit scope of the study centers on the managers, supervisors and administrative staffof the selected manufacturing companies.

Review of Related Literature

Vertical Diversification

Vertical diversification involves a company investing along the production chain by taking control of different production stages along the supply chains. When a company takes control of its materials supply, it is called backward integration, and when it takes control of its product distribution, it is referred to as forward integration (Kenton, 2019). Sudarsaam (2010) in Ahmed and Simba (2019) summarizes vertical diversification as the combination of successive activities in a vertical chainundera commoncoordination and control of a single firm. It is presumedthat a company improves the control of the supply chain in vertical integration when it increases its market share by taking over its competitors in the related markets at the same level of the supply chain in horizontal integration (Oloda, 2017).

Backward integration

According to Kenton (2019) backward integration strategy is an offshoot of vertical integration strategy inwhich an organization undertakes tasks previously embarked upon by businesses in the supply chain through merging with or acquiring businesses or doing it on their own. He asserts that the company engages in backward integration in order to improve efficiency and save costs. For, Nagambu (2020),backward integration enables a company to have control over the supply chain and have direct access to the required raw materials, which enables them to achieve efficiency and competitiveness over other companies in the industry.

Forward Integration

Forward integration occurs when a manufacturing firm diversifies by performing the job of distribution or middlemen or going closer to the customers. Forward integration allows a manufacturing company to assure itself of an outlet for its products and it allows a firm to have more control over how its products are sold and serviced (Barney, 2017). A manufacturing firm can be more effective and efficient by diving into distribution activities usually done by middlemen (Marangu, et al, 2014). By opening its own retail outlets, a firm is often better able to control and train the personnel selling and servicing its equipment (Barney, 2017). More recently, firms take their products to the market through the sales representatives so as to remain competitive. According to Pearce and Robinson (2010), some firms employ forward integration strategies to eliminate the "profits of the middleman."

For instance, Nestle PLC uses sales representative to move closer to the retailers and end users of their products boycotting the activities of the intermediaries. Adeleke, et al (2019) stated that forward integrationhelps to improve the ability to differentiate the product and enables firms to access thedistribution channels, thereby removing any bargaining power the channels may have. Also itprovides better access to market information by allowing the firm to determine the quantity ofdemand for its products sooner, than if it had to infer it indirectly from customers' orders.Finally, it allows higher price realization to the organization.

Organizational competitiveness

According to Wilfred, et al (2014) organizational competitiveness refers to its ability to create more economic value than other competing firms. Similarly, enterprise competitiveness refers to its ability to design (Ambastha & Momaya, 2004), produce and/or market products superior to those of offered by competitors, considering the price and non-price product qualities (Sadegh, et al, 2015).Diaz-Chao (2015) relates organizational competitiveness to continuous presence in markets, profit making and the ability to adapt production to demand.

Competitiveness at the firm level, constitute an important matter for practitioners, in order to create and develop abilities, a proper performance of recourses and management of factors that influence the results in the market place are paramount. If a company, wants to grow and being superior, obtaining sustainable competitive advantages and superior performance over competitors such firm must strategize. Sharma and Kesner (2016) argued that diversifying entrants enter at a bigger scale and are more likely to survive and grow than undiversified entrants; consequently diversifying entrants pose a bigger threat, in increasing rivalry and challenging incumbents' market share, than undiversified entrants. This entails that a more diversified firm is more competitive having several products to offer that facilitate survival of the stiff competition in the industry. Once more and more customers perceive benefits they gain by purchasing a firm's product, then they tend to buy more of the products which lead to gaining more market share which is an indicator of competitiveness (Barney, 2017).

Theoretical Review

Vertical diversification theory has its root in transaction costs economics traceable to the Coase (1937)seminar work titled "The nature of the firms". Coase (1937) argues that a firm would not exist if therewere no explicit transaction costs. He emphasized that all activities embarked upon by firms can beexplained if transaction costs exist. According to him, with limited resources and uncertain environment, economic agents would always seek the most cost-effective means of achieving their goals. The principle of marginalism comes intoplay in decision making as regards

to cost. At the margin, these "costs must be equal to each other (marginal revenue) or equal to the costs involved in leaving the transaction" to be "organized" by the price mechanism. The firm wouldundertake the task or embark on production if the cost of embarking on production through the marketprice mechanism is higher than that of embarking on the production within the firm. But if the cost ofundertaking the task or production within the firm is higher, it pays the firm to allow the goods to beproduced or task to be undertaken through the price mechanism (decision to make or buy).

Transaction costs economists believe that organizational economies help to reduce management costs. They held that a firm may produce whatother firms produce and compete with them, what makes the difference is that the firm is likely to be organizeddifferently or use different technologies.

This theory is related to this study because for an organization to be competitive it must offer lower price products and of a higher quality. This is achievable through minimization of cost which vertical integration can guarantee. Koch (1980) in Oshodi (2022) asserts that vertical diversificationallows a firm to reduce cost, increase efficiency, reduce and restrictcompetition.

Empirical Review

Oji, et al (2014) examined theimpact of backward integration policy on Nigerian cement industry, 1999-2012. The study was anchored on some basic propositions emanatingfrom the Marxian political economy theory. Data for the study was collected through primary and secondary data(written descriptions), face-to-face elite interview with a total ofthirteen interviewees and indirect observation of the cement market dominance and pricefluctuations at different intervals. The data was analyzed using Herfidahl-Hirschmanindex and found out that the backward integration policy on cement increased the output of cement in Nigeria also that the restriction of license to import cement in Nigeria has led tothe empowerment of the local cement producers. It recommends for review of backwardintegration policy for more positive effects.

Adeleke, et al (2019) explored the effect of forward integration strategy on organizational growth, evidence from selected insurance and banking organizations in Nigeria. Specifically the study sought to evaluate the relationship between direct marketing and profit performance of twelve selected insurance and banking institutions in south west, Nigeria. The study adopted descriptive survey design using questionnaire to solicit for information from 753 respondents that were staff of the sampled organizations. The result revealed that there was a significant positive relationship between direct marketing activities and profit growth in the selected organizations. Informed by the finding, the study concluded that there were a limited number of strategic integration moves, especially vertical integration among most of

the Nigerian financial organizations. It recommended that the Nigerian banking and insurance organizations are to enhance the personalization of their services to ensure that the existing customers remain locked in and new customers continue to be attracted.

Oshodi (2022) investigated the impact of the backward integration policy on manufacturing firms'value added in Nigeria. The study sourced it's data from the annual reports and statement of accountsof 49 sampled manufacturing firms, Central Bank of Nigeria statistical bulletin, National Bureau of Statisticsannual abstract and Nigeria Customs Service tariff books for the period (2002-2020). The Fisher-type AugmentedDickey-Fuller (ADF) unit root test procedure was employed to examine the stationarity properties of each of thevariables used in the study. Pooled Ordinary Least Squares (OLS) method was employed for the regression analysis. Thefindings show that backward integration policy through the use of local raw materials in productionsignificantly led to an increase in manufacturing firms' value added in Nigeria. An increase in the use of local rawmaterials in production led to an increase in value added by all sampled firms across manufacturing industriesin Nigeria. The findings also reveal that fixed assets, employment, energy cost and exchange rate have a significantpositive influence on the value added of all sampled manufacturing firms.

Kaiser and Obermaier (2020) investigated the impact of vertical (dis-)integration on Firm performance: A Management Paradigm Revisited. The researchers used a sample of 434 German manufacturing firms between 1993 and 2013 who have a decreasing trend of vertical integration over time. Applying multiple regression analysis, they found a positive, but diminishing relationship between the degree of vertical integration and financial performance. These two findings described a paradox of vertical disintegration. Probing further, they observed that the decreasing trend mainly emerged because lower performing firms outsourced their activities significantly whereas high performing firms did not show such a development. They concluded that their results indicated that German manufacturing firms might have gone too far in their vertical disintegration strategy by following a management paradigm which needs much more critical reflection.

Lin, et al (2014) considered two competing supply chains, each consisting of supplier, a manufacturer, and a retailer. The suppliers exert effort to improve product quality, and the retailers sell products competitively. Each manufacturer chooses one of the three strategies: forward integration, backward integration, or no vertical integration. The paper seek for a sub game perfect Nash equilibrium and study the resulting market structure. Moreover, the study examined the effect of vertical integration on profitability, product price, and quality in a competitive setting. In contrast, the study found that, when both forward and backward

integration options are considered, disintegration cannot be an equilibrium outcome. In this case, both manufacturers either forward or backward integrate, and the degree of product perishability, cost of quality, and how much consumers value quality are critical for the chosen direction of integration. Furthermore, competition increases attractiveness of backward integration relative to forward integration. The study showed that, while integrating backward unilaterally is always beneficial, unilateral forward integration can harm a manufacturer's profitability. Finally, vertical integration can result in a better quality product sold at a lower price.

Research Method

The study adopted a descriptive survey design. The study was carried out on four listed manufacturingcompanies located in south-east, Nigeria. The population of the study was 594, and a sample size of 239 was drawn, using the method of Taro Yamane. The sample size stated was selected using stratified proportionate random sampling technique. This sampling technique was used so as to ensure equal and fair representation from each strata. Data for the study was collected from theprimary source through questionnaires that were administered to the managers, supervisors and administrative staff of theselected firms. Information collected through the questionnaire was presented in tables using descriptive statistic: frequency, mean, standard deviation and percentage. A 4-point likert scale of SA-Strongly Agree (4), A-Agree (3), D-Disagree (2), SD-Strongly Disagree (1) was used to develop the answer options for thequestionnaire. The instrument was validated by experts based on face and content validity. A Cronbach'smethod of reliability test was carried out on the instrument to determine it's reliability. The resultshowed a score of 0.94, which implied that the test instrument is above the recommendedreliability of 0.70, thereby indicating high reliability. Two hundred and three-nine(239) questionnaires were administered out of which 226 copies were retrieved, and out of this number, 11 being 4.9% were wrongly filled. Hence 215 (95.1%) questionnaires were usedfor the data analysis. The hypotheses of the study were tested with Theil-sen regression while the extent of relationship between the variables were determined using Spearman rank correlation analysis with the aid of SPSS 23.

Research Findings

Findings under this section were based on the means and standard deviation for the data that was collected through the likert scale, measuring the level of agreement of the respondents with respect to the given aspects of vertical diversification. The results were as presented in Tables.

Table 1: Backward Integration (BI)

Statements	SA	A	D	SD	N	Mean	Std Dev

My firm maintains the quality of our raw material and products so as to ensure the right standards.	142	32	36	5	215	3.45	0.89
The productivity of my firm has improved due to the introduction of BI	135	59	9	12	215	3.47	0.82
My firm operates in full capacity because there is no stock out situation.	191	11	14	0	215	3.84	0.53
My firm achieves optimal price for our products due to BI	201	13	1	0	215	3.93	0.30
My firm takes advantages of emerging opportunities afforded by an expanding economy and government policies.	120	18	53	24	215	3.09	1.15

Source: Field survey (2023)

Table 1 shows the responses of all the respondents in terms of mean and standard deviation on statements measuring the relationship between backward integration and competitiveness of the listed manufacturingcompanies. All the statements were agreed upon as the competitive drive of BI tomanufacturing firms.

Table 2: Forward Integration (FI)

Statement	SA	A	D	SD	N	Mean	Std Dev
My firm reduces the risk of distribution value chain bottleneck by engaging in FI.	197	15	3	0	215	3.9	0.34
My firm effectively delivers goods as at when needed.	181	23	10	1	215	3.78	0.54
Direct sale creates room for immediate feedback which facilitates product improvement.	203	10	0	2	215	3.91	0.34
Our customers' needs are well understood and form the basis of the	141	28	32	14	215	3.38	0.96

organizational operations.							
My firm timely adapts to the market Changes and customers' needs.	162	37	15	1	215	3.67	0.62

Source: Field survey (2023)

According to the findings on table 2, the respondents with means of 3.9, 3.78, 3.91, 3.38 and 3.67 respectively agreed upon the statements itemized in the instrument as the benefits of FI with respect to manufacturing companies' competitiveness.Also standard deviation values of 0.34, 0.54, 0.34, 0.96 and 0.62 show slim variations in the responses of the respondents to the statements.

Table 3: Organizational Competitiveness

Statement	SA	A	D	SD	N	Mean	Std Dev
My firm has competitive edge in the industry,	130	60	12	13	215	3.43	0.85
My firm's products enjoy customers' loyalty.	199	6	8	2	215	3.87	0.50
My firm dominated the market place thereby creating barriers for new entrants.	121	81	6	7	215	3.47	0.71
Competitors' current and future plans are well predicated by my firm.	60	45	92	18	215	2.68	1.39
Information regarding competitors' action is regularly collected and discussed to inform the formulation of new strategies.	158	33	13	11	215	3.57	0.82

Source: Field Survey, (2023)

According to findings on table 3, the respondents with a mean of 3.43 and standard deviation of 0.85 agreed upon the statement that their firms have competitive edge in their industry. Also on the statement, my firm's products enjoy customers' loyalty was strongly agreed by the respondents with a mean of 3.87 and standard deviation of 0.24. Furthermore, the statement that my firm dominated the market place thereby creating barriers for new entrants was agreed upon with mean of 3.47 and standard

deviation of 0.71. Further findings show that the Competitors' current and future plans are well predicated by the firms was agreed upon with a mean of 2.68 and standard deviation of 1.39. The respondents also agreed with the statement, information regarding competitors' action is regularly collected and discussed to inform the formulation of new strategies with mean of 3.57 and standard deviation of 0.82.

Research Questions/ Test of Hypotheses

Research Question One

What is the extent to which backward integration links with competitiveness of listed manufacturing companies?

Table 4.Spearman's Rank CorrelationSummary for Backward Integration and Competitiveness

Variables	n	∑	$\overline{X}$	SD	R
Backward Integration	215	3259	15.158	2.850	
					0.789
Competitiveness	215	2977	13.847	3.845	
		High Relationship			

Source: Extracted from SPSS Output

Table 4 shows the result obtained in respect of research question one. The result reveals that the Spearman rank correlation coefficient is 0.789, which is high. This implies that backward integration has a strong relationship with the competitiveness of listed manufacturing companies.

Testing of Hypothesis One

Ho_1: Backward integration does not significantly relate with the competitiveness of listed manufacturing companies.

Table 5: Theil-Sen Regression Summary for Backward Integration **and** Competitiveness

Response: Competitiveness	Df	Sum of Squares	Mean Squares	F-value	p-value
Backward Integration	1	1738.6	1738.6		

				199.64	0.000
Residuals	213	1855.0	8.71		

Source: Extracted from R-Studio Output

The result in Table 5 shows the mean squares of 1738.6 for backward integration and 8.71 for residuals, F-calculation value of 199.64 and a p-value of 0.000 which is less than 0.05. This indicates statistically significant result. Therefore, the null hypothesis that stated that backward integration does not significantly relateswith the competitiveness of listed manufacturing companies is rejected. Hence, the study concludes that backward integration significantly relates with the competitiveness of listedmanufacturing companies.

Research Question Two

To what extent does forward integration relate with competitiveness of listed manufacturing companies?

Table 6: **Spearman's Rank CorrelationSummary for Forward Integration and Competitiveness**

Variables	**n**	**∑**	$\overline{X}$	**SD**	**R**
Forward Integration	215	3242	15.079	3.326	
					0.480
Competitiveness	215	2977	13.847	3.845	
		Moderate Relationship			

Source: Extracted from SPSS Output

Table 6 shows the result obtained in respect of research question two. The result reveals that the Spearman rank correlation coefficient is 0.480, which is moderate. This implies that forward integration has a moderate relationship with the competitiveness of listed manufacturing companies.

Testing of Hypothesis Two

Ho_2: Forward integration does not significantly relate with the competitiveness of listed
manufacturing companies.

Table 7: Theil-Sen Regression Summary for Forward Integration **and**Competitiveness

Response: Competitiveness	**Df**	**Sum of Squares**	**Mean Squares**	**F-value**	**p-value**
Forward Integration	1	1331.81	1331.81	344.26	0.000

Residuals	213	824.01	3.87

Source: Extracted from R-Studio Output

The result in Table 7 shows the mean squares of 1331.81 for forward integration and 3.87 for residuals, F-calculation value of 344.26 and a p-value of 0.000, which is less than 0.05. This indicates statistically significant result. Therefore, the null hypothesis, which stated that forward integration does not significantly affect the competitiveness of listedmanufacturing companies, is rejected. Hence, the study summarizes that forward integration significantly relates with the competitiveness of listedmanufacturing companies.

Discussion of Findings

Relationship between Backward Integration and Organizational Competitiveness of listed Manufacturing firms in south east, Nigeria.

The outcome of the analysis on how Backward Integration relates with Organizational Competitiveness revealed that there is a noteworthy relationship between Backward Integration and Organizational Competitiveness, given the p-value of 0.000 which is less than the level of significance of 0.05 ($p=0.000 < 0.05$). The hypothesis which was given in null form was thus rejected and the alternate hypothesis was accepted. The Spearman rank correlation coefficient (rho) of0.789 indicates a strong positive relationship between Backward Integration and Organizational Competitiveness of listed manufacturing companies in South-East, Nigeria. The positive relationship implies that the organizational competitiveness increases whenthere is an increase in Backward Integration. In essence, when Backward Integration is low, such could hinder competitiveness in manufacturing companies. Hence, Backward Integration is an essential factor in manufacturing organizations that facilitates increase in organizational competitiveness. This finding concurred with that of Marangu, et al (2014); Oji, et al (2014); Ahmed and Simba (2019) and Oshodi (2022) who argued that backward integrationsecures the ownership to the sources of various inputs from suppliers which increases the ability to influence the specific types of inputs required for quality product that foster customer satisfaction thereby gaining competitive advantage to the manufacturing firms. This finding has extended the argument by clearly demonstrating that with increase in backward integration, these manufacturing firms are sure of increasing their product quality, offer optimal price and meet their customers' expectations, by extension amplified their competitiveness.

Relationship between Forward Integration and Organizational Competitiveness of Listed Manufacturing firms.

The outcome of the second hypothesis on how Forward Integration relates with organizational competitiveness showed that the p-value was 0.000 which was less

than 0.05 level of significance ($p = 0.000 < 0.05$). This connotes that Forward Integration influences significantly the competitiveness of manufacturing firms in South-east, Nigeria. The null hypothesis inaccordance with the decision rule was rejected and the alternate hypothesis was accepted. Furthermore, there is a moderate relationship between forward Integration and organizational competitiveness with a positive correlation value of 0.480. This is to say that forward Integration has a moderate positive relationship with the competitiveness of the listed manufacturing firms. By implication, a unit change in forward Integration will account for 48% total variation in competitiveness of the manufacturing firms. Thus, one can assert that higher forward Integration is a contributory factor to higher level of firm's competitiveness.This finding agrees with that of Adekeke, et al (2019) whosubmitted that direct sales can give an organization a competitive edge in an industry. Also accessibility of the products as whenneeded brings about customers' satisfaction. This assertion agrees with the finding of Lin, et al (2014) that Forward integration enables a manufacturer to better manage the demand side by directly controlling the retail price and its accessibility which gain a firm competitive advantage. Thus, this study provides empirical support for Marsh (2019), who argued that effective vertical integration helps a firm to incorporate the necessary technologyboth at upstream and downstream which helps them to increase their competitiveness.

Conclusion

Organizational competitiveness is paramount for survival and growth of manufacturingcompanieshence vertical integration is diversification strategy that can position a firm to gain competitive advantage over competitors in an industry.Verticalintegration entails backwards and forward moves along the value chainactivities thereby internalizing the activities and transactions that werepreviously carried out by a number of separate and segregated business entities.Manufacturing companies'organizational competitiveness is critical for ensuring that they compete favorably with competitors. Manufacturing companies have to integrate vertically (backwardandforward) for it has beenempirically proved to have a clear linkbetweenbackward and forward integration and organizational competitiveness.

Recommendations

This study recommends the following in light of its results and perspective on the relationship
between backward and forward integration and organizational competitiveness of listed manufacturing firms in South-East, Nigeria.

1. Manufacturing firms' management should continually ensure that their value chain is enhanced in order to provide optimal customer satisfaction,

for this will assist the firms to improve their competitive position.

2. Manufacturing firms should explore the local content policy by the government of the dayby diversifying backwardly as to control the quality of their inputs, product and maximize their capacity.
3. Forward integration is suggested to manufacturing firms for more robust relationship between the firms and retailers / end users, which can facilitate first-hand information on product performance and innovation.

Contribution to knowledge

The study shows empirically that vertical diversification positions manufacturing companies to gain competitive advantage over her competitors in the industry. Compared to previous studies wherevertical integration was linked to organizationalperformanceusingfinancial indicators, this study has expanded its horizon by measuring organizational competitiveness using primary source of data. A different method of data analysis (Spearmanrank: rho) was used to ascertain the nexus of both variables. This further supplements the spectrum of knowledge on the essentials of vertical integration (forward and backward) on organizational competitiveness of manufacturing companies in Nigeria and a strategic path for managerial decision to outsmart their competitors.

References

Abuh, A. P. & Echechukwu, I. J. (2020). Diversification strategy and performance of manufacturing firms in Nigeria. *International Journal of Public Administration and Management Research (IJPAMR), 5* (4). DOI:10.36758

Adeleke, S., Onodugo, V. A, Akintimehin, O.O & Ike, R. I. (2019). Effect of forward integration strategy on organizational growth: Evidence from selected insurance and banking organizations in Nigeria. *Academy of Strategic Management Journal18* (2) Online ISSN: 1939-6104.

African Development Indicator (2013). Central Bank of Nigeria (CBN) series of statistical bulletins published by the *Central Bank of Nigeria*.

Ahmed, A. M., & Simba, F. (2019). Effect of corporate diversification strategy on corporate performance of Hashi Energy (K) Ltd. *TheStrategic Journal of Business & Change Management*, 6 (2), 404 – 423.

Ahluwalia, I.J. (1985), *Industrial Growth in India: Stagflation since the mid-Sixties*. Oxford University Press.

Ambastha, A. & Momaya, K.S. (2004). Competitiveness of Firms: Review of theory frameworks and models. *Singapore Management Review*, 26 (1). Retrieved from www.researchgate.

Anyanwu, C. M. (2020). *Productivity inthe Nigerian Manufacturing Industry*. Avan Global Publication.

Barney, J. (2017). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120.

Baum, C. F., Schaffer, M. E., Stillman, S., (2012). Enhanced routines for instrumental variables/GMM estimation and testing. *The Stata Journal* 7(4), 465-506.

Behun, M., Gavurova, Tkacova, B. & Kotaskova, A. (2018). The impact of the manufacturing industry on the economic cycle of European Union countries. *Journal of Competitiveness10* (1),ISSN 1804-171X (Print), ISSN 1804-1728 (On-line), DOI: 10.7441/joc.2018.01.02

Coase, R. H. (1937). The nature of the firm. *Economica*, 4(16), 286-405. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1468-0335.1937.tb00002.x

Desai, A.V. (1981), "Factors Underlying the slow growth of Indian Industry"*Economic and Political Weekly*, Annual Number, March.

Díaz-chao A., Sainz-González J. & Torrent-Sellens J (2015). The competitiveness of small network-firm: A practical tool. *Journal of Business Research 69*, 1769-1774.

Haim, H. (2015). Significance of studying product diversification, geographic diversification, and their interaction impacts for Malaysian companies: A literature review. *Asian Social Sciences Journal, 11*(10), 238-250.

Hanafi, M.M., Setiyono, B.,& Sanjaya, P.S. (2018). Ownership structure and organization performance: Evidence from the supreme crisis period. *The International Journal of Business in Society, 18*(2), 206–219.

Herman, E. (2015). The importance of the manufacturing sector in the Romanian economy. *Procedia Technology*, *22* (1), 976–983. https://doi.org/10.1016/j.protcy.2016.01.121

Kenton, W. (2019). *Backward integration*. https:// www.investopedia.com/terms/b/backwardintegration.asp

Lin, Y., Parlakturk A.K & Swaminathan, J. M. (2014). Vertical integration under competition: forward, backward, or No Integration? *Production and Operation Management*, 23(1), 19-35.DOI 10.1111/poms.12030

Marangu, W.N, N'gondu, C.N.& Egessa, R.K.W. (2014). An assessment of the effect of vertical diversification on organizational competitiveness: A case of sugar firms in Kenya. *European Journal of Business and Management 6* (12), 21-29, www.iiste.org ISSN 2222-1905.

Marsh,E. (2019). *InternationalDiversification-Hedging Riskand Uncertainty*. Consilium: www.consiliumglobalbusinessadvisors.com/.../uncertainty, 1 - 6

Mayila, J., Sinclair, J., Dobbs, R., Strube, G., Rassey, L., Mischke, J., Remes, J., Charles Roxburgh, C., George, K., David O'Halloran, D. & Ramaswamy, S. (2017). *Manufacturing the Future: The Next Era of Global Growth and Iinnovation.McKinsey Global Institute*.https://www.mckinsey.com/business-functions/operations/our-insights/.

Muculloch, N., Balchin, N. Menez-Pam, M. & Onyeka, K. (2017). Local content policies and backward integration Nigeria. ODI SET paper 1-52. http//setodi.org.

Nagambu, M.M. (2020). *Perceived Influence of Backward Integration Strategy on Organization Efficiency in Cement Industry in Kenya*. Master of Business Administration Research Project submitted to the School of Business University of Nairobi, Kenya.

National Bureau of Statistics (2019, 2020,2021). *Annual Abstract of Statistics*.

Nickels. M. M. (2012). *Understanding Business*, 6th Ed, McGraw Hill Irwin.

Ohamain, E. I. (2014). The success of the backward integration policy in the Nigeria cement sector. *International Journal of material Sciences & Application*, 3(2), 70-78.

Oji, R.O., Ezeibe, C. & Eme, O.I. (2014). Political economy of backward integration in theNigerian cement industry, 1999-2012. *International Journal of Accounting Research*, 2(2),1-27. https://www.arabianjbmr.com/pdfs/

Olannewaju, R.A (2016). Backward integration: A panacea for rural development in Nigeria. *Academic Journal of Economics Studies*, 2(4), 38-56.

Oloda, O. F. (2017). Vertical integration strategy and organizational survival in manufacturing firms in

Port Harcourt, Rivers state, Nigeria. *International Journal of Advanced research, 3*(1), 36-43.

Oluwa, J., Ropheka, M. & Iyakwari, A., (2023). *The Role of Manufacturing Sector in Nigeria's Economy*. www.reserachgate.net.

Oshodi, A F. (2022). Backward integration policy and manufacturing firms value added in Nigeria. *Journal of Economics and Culture,* 19(1), DOI: 10.2478/jec-2022-0001

Pearce, J. & Robinson, R. (2010). *Strategic Management; Formulation Implementation and Control*. McGraw-Hill Irwin.

Porter, M.E. (2017). From competitive advantage to corporate strategy.*Harvard BusinessReview, 46*.

Sadegh, R., Senin, A.A. & Tourani, A. (2015). Effect of organizational factors on university-industry collaboration: A conceptual model. *International Journal of Business Management 9*, 327-342.

Sharma, A.& Kesner, I.F. (2016). Diversifying entry: Some explanations for post entry survival and growth. *Academy of Management Journal.*

Wheeller, L.T.& Hunger,J.D. (2014). *Strategic management and business policy: Concepts and Cases, 11th Ed*, Prentice Hall.

Wilfred N.M., Matoke, J., Yegon, R. & Egessa, R. (2014). Moderating effect of organizational factors on the relationship between diversification strategies and competitiveness: Case of sugar firms in Kenya. *European Journal of Business Management*