

A Panel Study of Corporate Venturing and Listed Manufacturing Firms' Growth in Nigeria

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Abstract: The study sought to investigate the impact of corporate venturing dimensions on organisational growth with specific reference to consumer goods manufacturing firms listed by the Nigerian Stock Exchange (NSE) anchoring. The populace for the study comprised the twenty-one (21) listed consumer goods manufacturing companies in Nigeria as of January, 2020 out of which fifteen (15) companies were used as sample size based on inclusion and exclusion criteria. A panel study was conducted using ten years (2010-2019) of published and audited annual accounts. The techniques of evaluation used were Pearson Moment Correlation Coefficient and Multiple Linear Regression. The result exhibits a positive correlation between internal corporate venturing, external corporate venturing, cooperative corporate venturing, and organisational growth. The study supports the preceding studies that investment in corporate venturing is an alternative paradigm to organizational growth. Therefore, the study encouraged that manufacturing companies should invest judiciously on the corporate venturing. This will go a long way for the sector to take a leading position in economic activities. Certain limitations of the study were stated with some recommendations for future studies.

Keywords: corporate venturing; return on assets; manufacturing firms; Nigeria

Abstrak: Studi ini mempelajari dampak dimensi usaha korporat pada pertumbuhan organisasi dengan referensi perusahaan manufaktur barang konsumen yang terdaftar di Bursa Efek Nigeria (*Nigerian Stock Exchange*). Populasi untuk penelitian ini terdiri dari dua puluh satu (21) perusahaan manufaktur barang konsumen yang terdaftar di Nigeria pada Januari 2020 di mana lima belas (15) perusahaan digunakan sebagai ukuran sampel berdasarkan kriteria inklusi dan eksklusi. Sebuah studi panel dilakukan menggunakan rekening tahunan selama sepuluh tahun (2010-2019) yang telah diterbitkan dan diaudit. Teknik evaluasi yang digunakan adalah *Pearson Moment Correlation Coefficient* dan *Multiple Linear Regression*. Hasil penelitian menunjukkan korelasi positif antara usaha korporat internal, usaha korporat eksternal, usaha koperasi, dan pertumbuhan organisasi. Studi ini mendukung

studi sebelumnya bahwa investasi dalam usaha korporat merupakan paradigma alternatif untuk pertumbuhan organisasi. Oleh karena itu, studi ini mendorong bahwa perusahaan manufaktur harus berinvestasi secara bijak pada usaha korporat. Ini akan sangat membantu sektor ini untuk mengambil posisi terdepan dalam kegiatan ekonomi. Keterbatasan tertentu dari penelitian ini dinyatakan dengan beberapa rekomendasi untuk penelitian selanjutnya.

Kata Kunci: usaha korporat; tingkat pengembalian aset; perusahaan manufaktur; Nigeria

INTRODUCTION

Small and medium-sized companies (SMEs) are recognized as an engine of economic growth in both developed and emerging economies (Ademola & Michael, 2012; Mazzarol, Clark & Reboud, 2014). The adoption of entrepreneurial activities and open innovation have made these enterprises to take a leading position in economic activities (Brunswicker & Vanhaverbeke, 2015; Choi & Lim, 2017; Akinwale et al., 2017). As a result, some of them metamorphosed into corporate enterprises in a bid to compete favourably in the dynamic business environment. Hence, the dynamic nature of the business surroundings (Huang, 2009) has made a chance and growth-oriented corporations throughout the globe to be regularly a focal point on expanding their groups, irrespective of the assets and skills required for such investments (Lai et al., 2010). Dushnitsky and Birkinshaw (2016) pointed out that the purpose of corporate venturing initiatives is to develop corporate resources and abilities for the introduction of new technologies, entering new markets, and pursue inclusive company growth. Consequently, making corporate buyers to embrace future growth possibilities through corporate venturing investments (Baaken et al., 2019). Based on extant literature, businesses engage in corporate venture activities for various reasons: to build a revolutionary capability as the foundation for making the firm more innovative and change-oriented; to obtain higher value from existing competencies and enlarge the firm's scope into new areas of viable strategic importance; as well as to generate speedy economic returns (Morris et al., 2010).

Nevertheless, from the world perspective, corporate organizations have employed internal and external as well as cooperative corporate venturing (Selig et al., 2019; Enkel & Sagmeister, 2020; Kuratko et al., 2015) to revitalize operations, build new capabilities (Adeyeye, 2016; Gutmann, 2019), and gain sustainable corporate growth (Van Der Steen et al., 2013; Shu et al., 2020). On the contrary, some corporate organizations in Nigeria over four decades have declined in their operations due to a lack of continuous innovation. These innovations are necessities for manufacturing corporations as they have become an essential circumstance for survival in a globalised competition. Thus, the search for innovations is a fundamental mission for corporate ventures to ensure a consistent degree of innovative activities (Mazzarol & Reboud, 2020). The challenge faced by firms in current years is the re-establishment of their competitive advantage to reclaim the market share amid changing and unstable business environment (Shu et al., 2020). Also, the decline in innovation has hindered the growth of many companies as they seek to remain competitive in increasingly more difficult environments. It is on this observation that this study sought to investigate the impact of corporate venturing on firms' growth in Nigeria. This study is germane, especially now that many manufacturing companies in developing nations are striving for survival strategies amid a cut-throat global competitive business environment and COVID-19 surge syndrome. It is also expected to bring the manufacturing sector into the limelight of achieving sustainable development goals of generating jobs and contributing to lasting prosperity for all in developing countries by 2030.

Research Objective

The main objective of this study is to investigate the influence of corporate venturing on the growth of listed manufacturing firms in Nigeria through a panel data. Specifically, the objectives are:

- i. To ascertain the effect of internal corporate venturing on firm growth in manufacturing firms in Nigeria.
- ii. To evaluate the extent by which external corporate venturing influences firm growth in manufacturing firms in Nigeria.
- iii. To determine the impact of cooperative corporate venturing on firm growth in manufacturing firms in Nigeria.

Conceptual Review

Corporate venturing has been widely viewed by distinctive authors (Brumana et al., 2017; Torres-García et al., 2020) as the creation, adding or investing in new business within and outside the organisation. Brumana et al. (2017) as well as Kuratko et al. (2015) described corporate venturing as the advent of new businesses in existing companies via entrepreneurial activities, in that, it allows businesses to either prolong their core corporations or reconstruct organizational boundaries by developing new products or in search of new possibilities in new markets, aiming in the direction of growth. These new organizations have helped many organizations in their efforts to control entrepreneurial opportunities. Narayanan et al. (2009) described corporate venturing as a set of organisational systems, approaches and practices that centre on creating businesses in existing or new fields, markets or industries using internal and external means. Garrett (2010) contended that manufacturing firms are usually chosen as firms involved in internal corporate venture activities because their product technologies are common bases for diversification into new businesses.

Morris et al. (2010) posited that the rationale for engaging in corporate venturing activities by most corporations is to build an innovative capability, achieve greater value from existing competences and increase the firm's scope. In line with the argument of Morris et al. (2011), Leten and Van Dyck (2012) that identified five (5) success factors of corporate venturing activities. The first is having goal clarity which depends on the ability of the parent firm of not being confused in the outcome expected from an investment. This implies that for manufacturing firms to succeed in their innovative activities in investing within and outside the corporations, there should be a goal clarification which potential investments stand to achieve. For instance, if the aim of introducing a particular product is to cater for a specific need, the management should ensure that the right mechanisms are put in place for desired objectives. The second success factor which served as an instrument for the parent firm is the long-term commitment and the combination of other corporate development models. This indicates that the consumer goods manufacturing firms in Nigeria should ensure that adequate resources are channelled toward the success of any investment and also incorporate models. The third success factor is that manufacturing firms should invest in businesses that are close to that of the parent firm in terms of technologies, products and markets as it will allow transfer of resources from the parent firm to the new ventures for a greater chance of success. This will actually reduce the operation and other expenses that would have been incurred.

Furthermore, for corporate venturing activities to be successful and desirable growth achieved in manufacturing firms, the parent firm should operate the new venture in a distinct organisational unit with some degree of autonomy. A degree of autonomy should be given to the new venture as this would allow effective operation and the expected growth achieved.

Lastly, in order have a significant achievement, corporate venturing unit of the consumer goods manufacturing companies must be able to translate a given idea into a launched product. This is vital as any creative idea brought forward by the champions in the corporation should reach the mainstream developmental project having passed through both the ray of light project and emerging potential project for the project to be tested and finally launched.

LITERATURE REVIEW

Resource-Based View Theory

This study anchored on the resource-based view theory due to its relevance. The theory posited that possession and control of strategic assets decide which companies will earn the highest quality earnings and enjoy a position of competitive advantage over others. It also analysed and interpreted internal resources of the organizations, which must be valuable, rare, imperfectly imitable, and non-substitutable (VRIN) in order to be a source of sustainable competitive advantage (Barney, 1991; Madhani, 2010). The theory also emphasized that resources are not limited to the traditional economic productive factors; they include socially complex resources, such as interpersonal relationships within-firm managers, the firm's culture, or its reputation near the suppliers or clients (Barney, 1991). Grönroos and Ojasalo (2004) perceived resources as inputs into the production process and described capabilities as capacities to coordinate and deploy resources to perform tasks. These resources can be tangible (such as equipment, finance) or intangible (such as brand name, trade secrets), and capabilities may comprise

of sub-routines and master routines (like product development, distribution) that incorporate sub-routines into performance. Hence, resources underlie firm capabilities, which are the major source of competitive advantage.

Therefore, for manufacturing firms to have stable growth efforts should be made by the top management levels to ensure an adequate supply of tangible and intangible resources. For this reason, Barney (1991) noted that two assumptions were elemental to RBV; resources are distributed and used heterogeneously across firms, and these productive resources cannot be transferred from a firm to another without cost. These resources, which include tacit knowledge, capital, infrastructure, and skilled personnel, among others, become antecedents to goods and services and, ultimately, enhance firm performance (Barney, 1991). The key assumption of the RBV is this: firms' internal resources and capabilities are heterogeneous in nature, distinguishing them from other firms and giving them a competitive advantage that can yield sustained returns (Peteraf, 1993). The aim of the RBV is, thus, to enhance understanding of how firms attain and sustain competitive advantage, via resource heterogeneity (Barney et al., 2001).

Meyskens et al. (2010) and Castrogiovanni et al. (2011) established that the combination and management of resources would allow manufacturing firms to pursue new business opportunities and develop innovative actions that lead to more effective processes. Evidence has also shown that external corporate venturing plays a role in supplementing the resource portfolios of firms by helping facilitate access to external resources (Lai et al., 2010). From the strategic point of view of RBV of the firm, the manufacturing firms are a combination of unique competencies and capabilities which influences its evolution as well as strategic growth option (Barney, 1991). As a result, the theoretical analyses and interprets internal resources of a firm and also emphasizes resources and capabilities in formulating a strategy to achieve sustainable competitive advantage (Madhani, 2010).

Empirical Review

The following previous studies are reviewed because they are applicable to this current study. For instance, Abrell and Durstewitz (2016) conducted an exploratory research on customer and user knowledge in early internal corporate venturing projects in business-to-business (B2B) in large European manufacturing corporations. An embedded single case study research design was employed with a multiple methods of data collection, namely: interview, document analysis, design probe, and co-creation workshop. The study revealed that the B2B manufacturing context where the internal corporate venturing unit is located has significant influence on the use of customer and user knowledge. In the same perception, Del Giudice and Della Peruta (2016) surveyed 187 companies to investigate the impact of information technology (IT) based knowledge management systems on internal venturing and innovation in Italy. The survey was conducted using CATI (Computer Aided Telephone Interview) technique and structured questionnaires. Structural Equation Modelling (SEM) was used as a confirmatory analysis, and the results of the findings recognised the value of information technology as a major factor that facilitates innovation in knowledge management (KM). Vuori et al. (2012) also conducted a qualitative study to examine investment project as an internal corporate venture on four investment projects in Nestle Oil, namely Porvoo 1, Porvoo 2, Singerpore and Rotterdam projects with the purpose of analysing the relationship between the investment project and its parent. The collection of the empirical data was done through a single embedded unit case study. The results of the findings revealed that the projects have a degree of autonomy in relation to the parent, depending on their relatedness to the existing capabilities of the parent. Based on the findings, the study recommended that an investment project and its strategy can be analysed by regarding a project as a venture.

Basu et al. (2016) investigated how external corporate venturing units can effectively achieve external knowledge search and integration of their initiatives with mainstream organisational units in the United States. The study employed a qualitative, inductive research approach of 17 corporate venture capital units in the United States-based firms. Utilizing a three-case step analytical procedure: within-case analysis, evaluating performance outcomes for each case, and cross-case analysis, the findings provide exceptional insights into why some corporate investors are better at learning from external start-ups than others. The study recommended that, through effective integration, corporate venture capital units can often transform hostile corporate environments to become more responsive to their activities. Furthermore, Titus Jr. et al. (2015) examined how a firm's engagement in exploration influences its portfolio of external corporate venturing activities by considering corporate venture

capital investments, joint ventures, and acquisitions in publicly traded firms in United States. The study employed a sample of 1,326 firm-year observations in three largely defined industries: information and communication technologies (ICT), chemicals, and medical and laboratory equipment covering 1996-2008. Two (2) hypotheses were formulated, and an econometric analytical method was used to correct self-selection bias. The findings indicated that exploratory firms seek to maintain external venturing flexibility through corporate venturing capital investments or joint ventures in an environment characterised with rapid technological change. The study recommended that environmental context should be considered as a fundamental component to developing an understanding of organizational learning.

Lai et al. (2010) empirically demonstrated how complementary assets moderate the relationship between external corporate venturing in established firms and those firms' technological scope. The research methodology adopted in the study was a panel data set containing patents, operations, and financial information during the period between 1997 and 2006 of 583 firms listed in the Electronic and Information Technology category of two stock markets in Taiwan (the Taiwan Stock Exchange/TSE and the Taiwan Over-the-Counter Securities Exchange/TOSE). Regression analysis was employed, and the results of the findings established that external corporate ventures facilitate an established firm's broadening of its technological scope. Based on the findings, it was recommended that established firms should exploit resource commonalities in their complementary assets while investing in external corporate venturing to facilitate the coordination of their technology portfolios by creating synergy between external partners.

Based on the above empirical studies, this study, therefore, hypothesized that:

H₁: Internal corporate venturing has impact on firm growth in manufacturing firms in Nigeria.

H₂: External corporate venturing has impact on firm growth in manufacturing firms in Nigeria.

H₃: Cooperative corporate venturing has impact on firm growth in manufacturing firms in Nigeria.

Gap in Literature

The corporate venturing has been acknowledged by scholars and professionals as a strong managerial tool for business expansion. The construct has been conceptualized in different ways in advanced nations. However, corporate venturing as a construct is still a challenge in Nigeria. For instance, the available studies such as Abrell and Durstewitz (2016), Del Giudice and Della Peruta (2016), Vuori et al. (2012), Basu et al. (2016), Titus Jr. et al. (2015) and Lai et al. (2010) are foreign, and their findings may not be applicable in Nigeria context due to the different environmental and economic factors. Academically, there is a paucity of studies that linked corporate venturing dimensions to firm growth in Nigeria. This current study, therefore, intends to fill this existing gap in the literature.

RESEARCH METHODOLOGY

Research design adopted for this study was ex-post facto research design because its methodological investigation can be verifiable and cannot be manipulated. A panel study was conducted using ten years of (2010-2019) published and audited annual accounts of the 15 sampled companies out of the 21 consumer goods manufacturing firms listed by the Nigerian Stock Exchange (NSE) as at January 2020. The methods of analysis used were Pearson Moment Correlation Coefficient and Linear Regression.

Model Specification

In this study, return on assets (ROA) was used as proxy for firm growth while internal corporate venturing (ICV), external corporate venturing (ECV) and cooperative corporate venturing for corporate venturing.

$$ROA = f \{ICV, ECV \text{ and } CCV\}$$

Econometrically, the model is expressed as follows:

$$ROA = \beta_0 + \beta_1 ICV + \beta_2 ECV + \beta_3 CCV + e$$

ROA = Return on Assets

β_0 = Constant Term

β_1, β_2 and β_3 = Coefficients of the independent variable

ICV = Internal corporate venturing
ECV = External corporate venturing
CCV = Cooperative corporate venturing
e = Error Term

The final model is given below:

$$ROA = \beta_0 + \beta_1 ICV_{it} + \beta_2 ECV_{it} + \beta_3 CCV_{it} + e_{it}$$

A Priori Expectation

The *a priori* expectation of the relationship between the dependent variable and each of the independent variables is given as follows: the intercept (β_0) is expected to be positive. This indicates that the value of the dependent variable is positive if all the independent variables remain unchanged; internal corporate venturing, external corporate venturing, and cooperative corporate venturing are expected to be positively signed. That is $\beta_0 > 0$; $\beta_1, \beta_2, \beta_3 > 0$.

Heteroskedasticity Test

To ascertain the reliability of the data used, the heteroskedasticity test was employed as a post-test tool. This test is basically on the variance of the error term. It helps to ascertain whether the variance of the error term is constant or not. Table 1 shows the result of the test:

Table 1. Heteroskedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	9.003	1.167		7.715	0.000
	ICV	1.494	0.000	0.124	0.703	0.483
	ECV	3.445	0.000	0.027	0.157	0.875
	CCV	1.723	0.000	0.078	0.795	0.428

a. Dependent Variable: Absut

From Table 1, p-values of ICV, ECV and CCV are 0.483, 0.875 and 0.428, respectively. The p-value for internal corporate venturing, external corporate venturing and cooperative corporate venturing is greater than 0.05. This indicates that there is no heteroskedasticity problem in the model (Astivia & Zumbo, 2019).

Table 2. Multicollinearity Test (VIF)

Model	Collinearity Statistics	
	Tolerance	VIF
Internal Corporate Venturing (ICV)	0.215	4.649
External Corporate Venturing (ECV)	0.236	4.233
Cooperative Corporate Venturing (CCV)	0.695	1.440

Source: Researchers' Computation

Multicollinearity Test

Multicollinearity test was used to check if there is any inter-association among the corporate venturing dimensions (see Table 2). From Table 2, the VIF values for Internal Corporate Venturing (ICV), External Corporate Venturing (ECV), and Cooperative Corporate Venturing (CCV) are 4.649, 4.233 and 1.440, respectively. The VIF value for each variable is greater than 1 but less than 10. According to Vatcheva et al. (2016), if the VIF value is between 1 and 10, this indicates that there is no multicollinearity. However, if the VIF value is less than 1 or greater than 10, then there is

multicollinearity. This means there is no multicollinearity among the independent variables in the model.

RESULTS AND DISCUSSION

Table 3 summarizes the relationship between corporate venturing dimensions and return on asset. The result reveals a positive correlation between internal corporate venturing ($r = 0.041$), external corporate venturing ($r = 0.140$) and return on asset. Furthermore, cooperative corporate venturing also has positive correlation ($r = 0.108$) with return on asset. The positive relationship implies that the variables change together in same direction. This implies that more commitment to internal corporate venturing, external corporate venturing and cooperative corporate venturing, the more the firm was stronger in the cut-throat global competitive environment. The result concurs with the findings of Abrell and Durstewitz (2016) and Del Giudice and Della Peruta (2016) that internal corporate venturing is major determinant of firm ontogenesis. In another study, Lai et al. (2010) established that external corporate venture is a veritable tool for firms' technological advancement.

Table 3. Relationship between Corporate Venturing Dimensions and Return On Asset

	1	2	3	4
1. Return on Asset (ROA)	1.000	0.041	0.140	-0.108
2. Internal Corporate Venturing (ICV)	0.041	1.000	0.831**	0.299**
3. External Corporate Venturing (ECV)	0.140	0.831**	1.000	-0.010
4. Cooperative Corporate Venturing (CCV)	0.108	0.299**	0.010	1.000

Table 4 depicts the impact of internal corporate venturing on firm growth. The F-value of 0.250 p-value of 0.618 and t-value of 0.500 indicates that internal corporate venturing has a positive but insignificant impact on firm growth. The beta value of 0.041 reveals that internal corporate venturing contributes 4.1% to firm growth. This development shows that investment in internal corporate venturing in Nigeria manufacturing industry has not succumbed substantial outcome. Therefore, H1 is partially accepted.

Table 4. Impact of Internal Corporate Venturing on Firm Growth

Model	Sum of Squares	df	Mean Square	F	p-value	Beta	t-value
Regression	44.702	1	44.702	0.250	0.618	0.041	0.500
Residual	26493.297	148	179.009				
Total	26538.000	149					

Table 5 details the impact of external corporate venturing on firm growth. The F-value of 2.946 p-value of 0.088 and t-value of 0.140 means that external corporate venturing has an impact but insignificant on firm growth. The beta value of 0.140 indicates that external corporate venturing contributes 14% to firm growth. This implies that investment in external corporate venturing has not been yielding significant results. Therefore, H2 is partially accepted.

Table 5. Impact of External Corporate Venturing on Firm Growth

Model	Sum of Squares	df	Mean Square	F	p-value	Beta	t-value
Regression	517.898	1	517.898	2.946	0.088	0.140	1.716
Residual	26020.102	148	175.811				
Total	26538.000	149					

Table 6 reveals that cooperative corporate venturing ($F = 1.752$, $t = 1.324$) has insignificant impact on firm growth. The study further reveals that cooperative corporate venturing contributes 10.8% to firm growth. This scenario indicates that cooperative corporate venturing has not yielded positive results. Therefore, H3 is partially accepted. The managerial implication of this finding is that for the Nigerian manufacturing industry to compete globally and wax stronger amid COVID-19 syndrome, corporate venturing activities must be substantially implemented.

Table 6. Impact of Cooperative Corporate Venturing on Firm Growth

Model	Sum of Squares	df	Mean Square	F	p-value	Beta	t-value
Regression	310.428	1	310.428	1.752	0.188	0.108	1.324
Residual	26227.572	148	177.213				
Total	26538.000	149					

CONCLUSION

The study sought to examine the impact of corporate venturing dimensions on the growth of the manufacturing industry with particular reference to consumer goods manufacturing firms listed by the Nigerian Stock Exchange (NSE). A panel study was conducted using ten years (2009-2018) of published and audited annual accounts. The methods of analysis used were Pearson Moment Correlation Coefficient and Linear Regressions. The result reveals a positive correlation between internal corporate venturing, external corporate venturing, cooperative corporate venturing, and organizational growth. The study supports the previous studies that investment in corporate venturing is an alternative paradigm to organizational growth. Therefore, the study recommended that the manufacturing industry should invest judiciously on corporate venturing. This will go a long way for the sector to take a leading position in economic activities.

Limitation and Future Research Recommendations

This study has several limitations that can be researched for future studies. First, the study was limited to the manufacturing sector which can be extended to other sectors such as the banking sector, Telecommunication sector, and Educational sector. Secondly, the study used only secondary data (annual reports) whereas, primary data such as, interviews, structured, semi-structured and unstructured questionnaires can be employed for further studies. Thirdly, the study used only a quantitative approach, meanwhile, both qualitative and quantitative techniques can be used in future studies. Finally, a comparative studies of manufacturing firms and service firms can be carried out within the same context, Nigeria or with other developing economies.

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