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Abstract

This study examined the relationship between process innovation capability and performance of indigenous oil and gas companies in South-South, Nigeria. The study adopted the cross-sectional research survey design. Primary data was generated through structured questionnaire. The population of this study was thirty-three (33) registered and functional indigenous oil and gas companies in South-South, Nigeria. In this study the researcher adopted a census sampling technique to study all the 33 indigenous oil and gas companies in Rivers State because the population was small. However, preliminary field survey revealed that there are at least five (5) employees in each of the indigenous oil and gas companies in Rivers State. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient. The tests were carried out at a 0.05 significance level. Findings revealed that there is a significant relationship between process innovation capability and performance of indigenous oil and gas companies in South-South, Nigeria. Therefore, the study concludes that an improvement in process innovation will lead to improved performance of indigenous oil and gas companies in the South-South, Nigeria. Similarly, market innovation was a key driver for the performance indigenous oil and gas companies in the South-South, Nigeria. Hence, the study recommends that the management of indigenous oil and gas companies should stipulate policies that provide and enhance platforms for process innovation so as to improve their performance. There is need also to invest in process innovation strategies that would optimize the HR practices around innovation, resource mobilization, revenue allocation and monitoring and evaluation to ensure efficiency in the innovation practices.

Keywords: *Process Innovation Capability, Performance, Sales Volume, Profitability, Growth*

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1.0 Introduction

The decline in performance of firms, according to Zafari (2017) cuts across developed, emerging and developing countries due to poor innovation capabilities and response to microeconomic and macroeconomic factor challenges like performance industry environmental factors, task environment, natural and technological environments, social environments, economic and cultural environments, and political, law and security environments coupled with the management of marketing content and product marketing. In developing countries especially African countries, harsh economic and external conditions have placed pressure on organizational performance (Bredenhann, 2019). The challenges facing firms operating in Africa are diverse and numerous such as political interference, lack of transparency, regulatory uncertainty, policy instability, ongoing infrastructure deficit, uncertainty, delays in passing laws, energy policies and regulations into law are stifling growth, development and investment (Pricewaters Coopers, 2018).

According to Mahapatro (2013), organizational performance is the capability of a firm to accomplishes its objectives and goals with the help of good governance and talented administration. Organizational performance is a sign which deals with how well a firm accomplish its goals. In an attempt to measure firm's performance, several scholars have proffered different measures such as customer satisfaction, product quality, employee satisfaction, organizational reputation, customer loyalty, competitive advantage, perceived image, capacity utilization, employee morale, operational efficiency, product innovations, inventory turnover and timeliness (Richard, Devinney, & Yip, 2009).

According to Daft (2010) the performance of an organization can be referred to as its capacity to meet its objectives using the resources available to it. These resources must be used both efficiently and effectively while at the same time being managed well. The firm should also keep on successfully adapting to the changes in its external environment while successfully fulfilling its goals and objectives (Hult, Hurley & Knight, 2014). Performance measures are largely described as two dimensional. One dimension involves the meeting of the performance objectives which are often depicted in market and financial measures such as market share, profitability and capacity building. The second measure is the judgmental or the subjective measure which is depicted in form of employees and customer measures such as customer satisfaction, quality of service and employee satisfaction (Agarwal, Erramilli & Dev, 2013).

Organizational life must include change as a necessary component. Therefore, organizations use innovative goods, processes, services, and organizational structures as tools to boost their ability to compete (Ettlie & Reza, 1992). In an effort to improve speed and efficiency, businesses frequently commit to formal methods of product invention (Hamel, 2006: Guerrazzi, Zanin & Falaster, 2017).

Companies looking to cut costs, boost quality, and gain other advantages can benefit from changes in structure and work procedures (Davenport, 1993). The theme is frequently ignored in the general literature on innovation, despite the fact that the economic impact of process innovations is just as significant as the introduction of new products and services (Reichstein & Salter, 2006; Adams, Bessant & Phelps, 2006; Macher & Mowery, 2009; Crossan & Apaydin, 2010). Process innovation means conducting an activity in a new way and implies the use of specific tools of change and the transformation of business processes (Davenport, 1993).

The capability to innovate is one of the top priorities of an enterprise' management in enhancing sustainability and promoting superior performance (Jonash & Sommerlatte, 2009). The innovation

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capabilities of a given company acquired over a given period influences significantly its performance. Majority of the organization measures their performance in terms of financial and non-financial indicators (Tangen, 2015). According to Essmann and du Preez (2009) an organization develops innovation capabilities in organizational support, knowledge and competence, and innovation process respectively. This implies that innovation capability maturity in any given organization is a process commencing with management's support in creating a conducive environment for innovative activities, then recruitment of the right people with the required knowledge and competence to finally carry out the innovation process (Jonash & Sommerlatte, 2009).

The purpose of this paper therefore was to examine the relationship between product innovation capability and sales volume of indigenous oil and gas companies in South-South, Nigeria. This study was guided by the following objectives:

i. Examine the relationship between product innovation capability and sales volume indigenous oil and gas companies in South-South, Nigeria.
ii. Ascertain the relationship between product innovation capability and profitability of indigenous oil and gas companies in South-South, Nigeria.
iii. Determine the relationship between product innovation capability and growth of indigenous oil and gas companies in South-South, Nigeria.

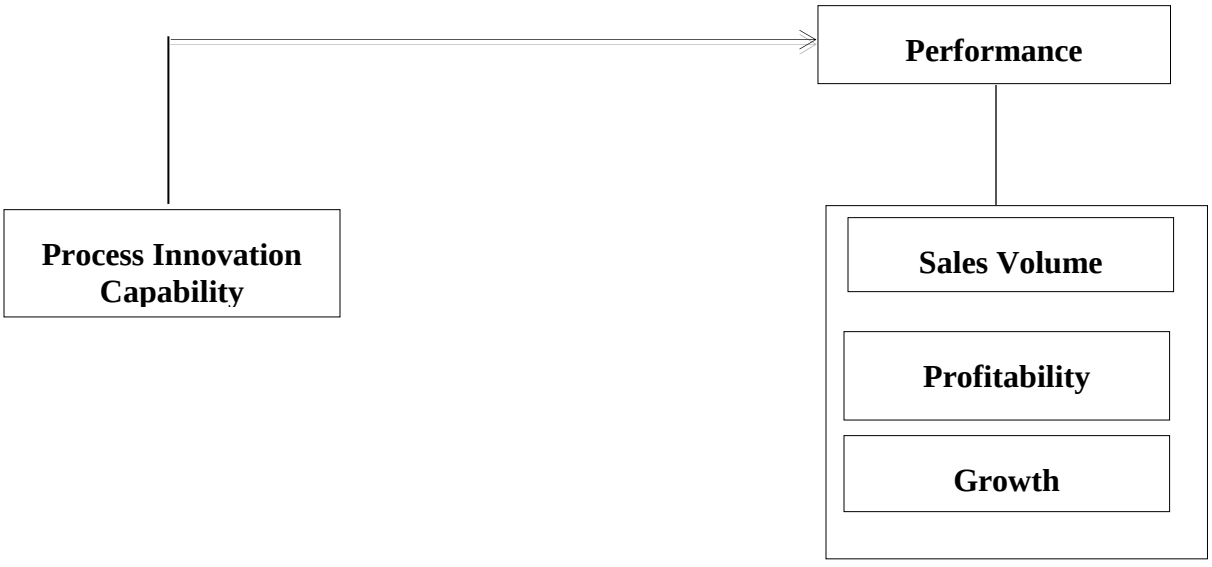

Figure1: *Conceptual model for the relationship between process innovation capability and performance*

Source: Desk Research (2022).

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2.0 Literature Review

2.1 Theoretical Foundation

Resource Based View Theory of the Firm

Resource Based View of the Firm Theory was coined by Penrose (1959). RBV regards the firm as a bundle of resources and capabilities that are heterogeneously distributed across firms that persist over time (Ambrosine & Bowman, 2009). Academicians suggest that when a firm has resources which are valuable, rare, inimitable and non-substitutable, they can use them to implement value creation strategies that provide a sustainable competitive advantage (Peteraf & Barney, 2003). RBV originates in the strategy literature (Wernefelt, 1984) which provides a useful framework for examining the development of management. This can be achieved by having critical resources that are firm-specific, valuable to customers, non –substitutable and difficult to imitate (Rugman & Verbeke, 2002).

Resource based view theory was employed with a major focus on how firm's resources and knowledge development affect performance (Kanyabi & Devi, 2012). It assumes that organization to achieve competitive advantage; it has to develop its resources. Other who expanded the theory were Wernerfelt (1984) and Helfat and Martin (2015). RBV emphasized resources and capabilities as the origin of competitive advantage. Eisenhardt and Martin (2000) looked at maximizing long run profits through exploiting and developing firm resources. It characterizes resources as valuable, rare, inimitable and non-substitutable. Firms generate rents through differences in information, luck and capabilities. The RBV approach sees firms with superior system and structures being profitable not because they engage in strategic investments but because they have markedly lower cost to offer. It focuses on the rents according to the owners of scarce firm-specific resources rather than the economic profits from market positioning. It puts vertical integration and diversification into a new strategic light (Ambrosine & Bowman, 2009).

The resources of a firm enable it to develop its innovation activity and adapt to the environment in which it operates (Ellul & Yerramilli, 2010). Uniform distribution of certain organizational resources and capabilities has positive effects on innovation process and capacity of firms. Organizational capabilities enable the organization to 9 combine and transform input into useful innovation processes and systems (Ernst & Young, 2012).

Process Innovation Capability

Process innovation refers to the implementation of a new or significantly improved delivery production method (Shaver, 2014). Process innovation happens when an organization solves an existing problem or performs an existing business process in a radically different way that generates something highly beneficial to those who perform the process, those who rely on the process or both (Viederyte, 2016). The first step in an innovation process is to understand the context. This should include a comparison with current competitive offerings and potential future entry based on available intelligence. Organizations today often bring in new information technology systems or find ways to use older in new ways at the forefront of their process innovation efforts (Viederyte, 2016).

Process innovation is different from incremental innovation in both scope and size (Detienne, Koberg & Heppard, 2001). Whereas incremental or continuous improvements generate limited value, innovation generates improvements that increase value by upward of 50%, 100% or even more. Some describe process innovation as creating radical or game-changing shifts (Lyons,

Chatman, & Joyce, 2007). In addition to the introduction of a radically new approach or technology, process innovation generally requires a longer planning time and support from high-level management. It's also riskier than incremental improvements and requires a higher level of cultural and structural change (Sergeeva, & Radosavljevic, 2010). Process innovation also typically impacts a broader portion of an organization than do incremental improvements.

Process innovation can generate value to either internal customers, including employees or the actual organization itself, or it can create value to external customers, including business partners, end users or actual consumers. Values stemming from process innovation include reducing the time it takes to produce a product or perform a service; increasing the number of products produced or services provided within a time frame; and reducing the costs per product produced or service provided. Additionally, process innovation can generate significant gains in product quality and service levels (Reguia, 2014).

Performance

Organizational performance can be simply defined as a company's results and achievements compared to goals and objectives (Richard, Devinney, Yip & Johnson, 2009). Cho and Dansereau (2010) define organizational performance about the organization's goals and objectives. Tomal and Jones (2015) refer to organizational performance as the actual results or outputs of an organization as measured against that organization's intended outputs. Organizational performance reflects the way an organization takes advantage of tangible and intangible resources to achieve its goals (Hunger & Wheelen, 2012) and the culmination of an organization's working process and activities. Nnabuife (2009) defines organizational performance as setting up a structure or mending an already existing one to suit the organizational environment and the demands of technology.

Moullin (2007) identified organizational performance as, a measure which is used by organizations so that they can manage their efficiency well, and deliver their worth to shareholders and clients. Since organizational performance is a multidimensional concept, it seeks to measure companies' achievement of the objectives proposed for different stakeholders in a given period (Richard *et al.*, 2009). Performance is the end result of activities (Bayo & Hamilton, 2022). It includes the actual outcome of the strategic management process. The practice of strategic management is justified in term of its ability to improve an organization performance measured in terms of profit and return on investment. For evaluation and control to be effective, managers must obtain clear prompt and unbiased information from the people below them in the organization hierarchy.

Firm performance is one of the most relevant constructs in the field of strategic management; a construct commonly used as the final dependent variable in various fields (Cho & Pucik, 2005; Richard, Derinney, Yip, & Johnson 2009). It is believed that the essence of performance is the creation of value, therefore, value creation, as defined by the resource provider, is the essential overall performance criteria for any organization (Monday, *et al.*, 2015). Continuous performance is the focus of any organization because only through performance are organizations able to grow and survive (Gavrea, *et al.*, 2011). A business organization could measure its performance using the financial and non-financial measures.

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Measures of Performance

Sales Volume

Sales volume is the parameter which is used to measure the performance of the sales team to increase the revenue over a pre-determined period of time. Sales volume is an essential parameter for performance and financial growth of the company (Blal, Singal & Templin, 2018). Sales volume can be defined in terms of revenue generation, value addition, and expansion in terms of volume of the business. It can also be measured in the form of qualitative features like market position, quality of product, and goodwill of the customers (Coad, Segarra & Teruel, 2016). Sales volume is a metric that measures the ability of the sales team to increase revenue over a fixed period of time. Without revenue growth, businesses are at risk of being overtaken by competitors and stagnating. Sales volume is a strategic indicator that is used in decision making by executives and the board of directors, and influences the formulation and execution of business strategy (Wales, Beliaeva, Shirokova, Stettler & Gupta, 2020).

According to Penrose (2006), growth is the product of an internal process in the development of an enterprise and an increase in quality and/or expansion. Growth is defined as a change in size during a determined time span (Dobbs & Hamilton, 2017). According to Janssen (2009), a company´s growth is essentially the result of expansion of demands for products or services. It first results in a growth in sales and consequently in investments in additional production factors to adapt itself to new demands (Janssen, 2009). However, Achtenhagen (2010) researched entrepreneurs´ ideas on growth and listed the following: increase in sales, increase in the number of employees, increase in profit, increase in assets, increase in the firm´s value and internal development. Internal development comprises development of competences, Organisational practices in efficiency and the establishment of professional sales process. This was the most important index for entrepreneurs that participated in the research. However, increase in the number of employees was not necessarily considered a sign of growth.

Profitability

Profitability is the ability of a company to use its resources to generate revenues in excess of its expenses. In other words, this is a company’s capability of generating profits from its operations (Trivedi, 2010). Profitability is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue, such as producing a product and other expenses related to the conduct of the business activities (Tulsian, 2014). Profitability means ability to profit from all the business activities of an organisation, company, company, or enterprise. It shows how efficiently the management can profit by using all the available resources (Etale, 2016).

Profitability is critical to a company's survival in the long term, and it measures a company’s past ability to generate returns (Santos & Brito, 2012). The ultimate long-term goal for a business should be growth rate in the bottom line. Ambad and Wahab (2013) argue that to ensure survival in the industry, profitability is a key issue for every profit-oriented company, maximising its goal. To achieve higher profitability, every company must have its strategy to fit into the current rapidly changing business environment. The final goal of every productive or industrial activity is more profitability. This involves the correct use of productive factors like resources and facilities and engagement in cost reduction schemes, all of which will increase productivity. Profitability or getting an advantage means the relation of profit with used capital.

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So, a company has to emphasize the two cases of increasing productivity and price improvement to achieve as much profit as possible (Tangen, 2003). The consequence of this is that no business can survive for a significant amount of time without making a profit. Therefore, the measurement of a company's profitability, both current and future, is critical in evaluating the company. Profitability has been considered as a measure of improved internal efficiency and value-added. In the binning, companies may not enjoy higher net profits to repay investment or fund further investment. However, internal efficiency gained later may lead to reduced costs, while improved product performance may increase the product's price in the market (Geroski & Machin, 2019).

Growth

Growth refers to the rate at which variables in an organisation such as earnings has been or is expected to grow (FTE, 2008). Growth rate refers to the percentage change of a specified variable within a specific period with a stipulated context which acts as benchmarks. An organisations growth rate measures the percentage increase in the value of a variety of markets in which an organisation operates (Zack *et al.*, 2009). An organisations growth rate can be achieved/improved on by boosting the organisations top line or revenue of the business with greater product sales or by increasing the bottom line or profitability of the operation by minimizing costs (Xesha, Iwu, Slabbert, & Nduna, 2014). Growth rate refers to the percentage change of a specified variable within a specific period with a stipulated context which acts as benchmarks. Growth rate refers to the rate at which variables in an organisation such as earnings has been or is expected to grow (FTE, 2008). An organisations growth rate measures the percentage increase in the value of a variety of markets in which an organisation operates (Zack *et al.*, 2009). An organisations growth rate can be achieved/improved on by boosting the organisations top line or revenue of the business with greater product sales or by increasing the bottom line or profitability of the operation by minimizing costs. Organisations are seen as living organisms and therefore, they possess same characteristics with living organisms. In other words, organisations also have life cycle, they are formed (born), grow to maturity, decline, and finally die of age.

Process Innovation Capability and Performance

Xie, Hoang and Zhu (2022) investigated the relationship between green process innovation and financial performance: The role of green social capital and customers' tacit green needs. The data used in this study were obtained from manufacturing enterprises located in China's Yangtze Delta Region. The data collected via the sampling survey method raised concerns about common method bias (CMB). We also conducted a pretest using 30 firms, and, from the pretest results, we improved the questionnaire to make it more robust. Following the pretest, we distributed 500 questionnaires to managers and technical supervisors of manufacturing firms in this region via both field surveys and email. The study found that that green process innovation has a U-shaped impact on firms' financial performance, such that the impact is initially negative but then becomes more positive as the level of green process innovation increases.

In the same vein, Muharam, Andria and Tosida (2020) carried out a study on the effect of process innovation and market innovation on financial performance with moderating role of disruptive technology. To investigate the proposed relationship, this study collected the data from managers of pharmaceutical firms in Indonesia by using survey questionnaire. PLS statistical software was employed to analyse the data. The result of this study highlighted that there is a positive relationship between process innovation, market innovation and financial performance of firms. While, results indicated that disruptive technology moderate the relationship of process innovation

with financial performance, but it has no moderating role on the relationship of market innovation with financial performance. The results of this study contribute to the body of knowledge by adding to the existing literatures in the domain of innovation capabilities and financial performance. Moreover, the findings of the study have shown that innovation capabilities are capable of influencing the performance of firms.

Furthermore, Kowo, Akinbola and Akinrinola (2018) conducted a study on the impact of process innovation on organisational performance. Primary and secondary data was employed for the study. The population of the study was the staff of Etisalat Telecommunications Company, Nigeria with primary focus on the NNPC-Ikoyi branch. A sample of one hundred and fourteen (114) employees out of the one hundred and sixty (160) employees population of the selected Ikoyi-Lagos Office branch of Etisalat Nigeria as calculated using the Taro Yamane formula. The study adopted survey method and Cronbach Alpha for test-retest reliability. Regression analysis was used to measure the effect of the independent variable to the dependent variable SPSS was also employed in testing the research hypothesis. The study found out that process innovation has a significant effect on organisational performance and there exists a significant relationship between service modification and sales volume.

More so, Ahiauzu, Uche and Jaja (2015) carried out a study on process innovation and organizational resilience in public universities in South-South Nigeria. The population of this study comprised management staff of ten public Universities in the south-south geo-political zone of Nigeria. The unit of analysis is at the organizational level, which consists of Administrative/management staff of the ten public Universities located in the South-south Region of Nigeria. The respondents comprise Vice Chancellors, Deans of Faculties, Directors, Registrars, and Deputy Registrars. Because of the heterogeneous nature of the population under study, the Taro Yemen's formula was used to determine a sample size of 313 participants. The hypotheses were tested using the Spearman's Rank Order Correlation statistical tool was used in the test for all hypothesized associations. The results showed a significant association between process innovation and the measures of organizational resilience which are: situation awareness, keystone vulnerability and adaptive capacity.

Also, Kenfac, Nekoumanesh and Yang (2013) examined process Innovation: impacts on organization's performance: A qualitative study of four Swedish Municipalities. The study adopted descriptive research. In this paper, a qualitative approach was used, implying the interest is to get a deeper understanding of the field of study through interviews. 4 out of 290 municipalities were interviewed. Content analysis was used to analyse the data generated. The study concluded that both administrative and technical innovations are required to achieve higher performance for an organization.

Similarly, Atalay, Anafarta and Sarvan (2013) undertook a study that examined the relationship between innovation and firm performance: Empirical evidence from Turkish automotive supplier industry. The survey of this study was conducted on top level managers of 113 firms operating in the automotive supplier industry which is one of the most innovative industries in Turkey, as of the year 2011. The obtained data from the questionnaires are analyzed through the SPSS statistical package program. The hierarchical regression analysis was used to test the hypotheses. Analysis results demonstrated that technological innovation (product and process innovation) has significant and positive impact on firm performance, but no evidence was found for a significant and positive relationship between non-technological innovation (organizational and marketing innovation) and firm performance.

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Based on the foregoing, the following hypotheses were derived:

Ho_1: There is no significant relationship between process innovation capability and sales volume of indigenous oil and gas companies in South-South, Nigeria

Ho_2: There is no significant relationship between process innovation capability and profitability of indigenous oil and gas companies in South-South, Nigeria

Ho_3: There is no significant relationship between process innovation capability and growth of indigenous oil and gas companies in South-South, Nigeria

3.0 Methodology

The study adopted the cross-sectional research survey design. Primary data was generated through structured questionnaire. The population of this study was thirty-three (33) registered and functional indigenous oil and gas companies in South-South, Nigeria. In this study the researcher adopted a census sampling technique to study all the 33 indigenous oil and gas companies in Rivers State because the population was small. However, preliminary field survey revealed that there are at least five (5) employees in each of the indigenous oil and gas companies in Rivers State. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics while the partial correlation was used to test the moderating effect of organisational structure. The tests were carried out at a 0.05 significance level.

4.0 Data Analysis and Results

The level of significance 0.05 was adopted as a criterion for the probability of accepting the null hypothesis in ($p > 0.05$) or rejecting the null hypothesis in ($p < 0.05$). The level of relationship between workplace safety promotional policies with each of the measures of organizational performance is to examine the extent workplace safety promotional policies can impact on the outcome of each measure of organizational performance.

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Table 1: Correlations Matrix for Process Innovation Capability and Performance Measures

			Process Innovation Capability	Sales Volume	Profitability	Growth
Spearman's rho	Process Innovation Capability	Correlation Coefficient	1.000	.844**	.793**	.595**
		Sig. (2-tailed)	.	.000	.000	.000
		N	145	145	145	145
	Sales Volume	Correlation Coefficient	.844**	1.000	.806**	.869**
		Sig. (2-tailed)	.000	.	.000	.000
		N	145	145	145	145
	Profitability	Correlation Coefficient	.793**	.806**	1.000	.806**
		Sig. (2-tailed)	.000	.000	.	.000
		N	145	145	145	145
	Growth	Correlation Coefficient	.595**	.869**	.806**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	145	145	145	145

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output version 23.0

H_{o4}: There is no significant relationship between process innovation capability and sales volume of indigenous oil and gas companies in South-South, Nigeria.

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.844 on the relationship between process innovation capability and sales volume. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in sales volume was as a result of the adoption of process innovation capability. Therefore, there is a very strong positive correlation between process innovation capability and sales volume of Indigenous Oil and Gas companies in South-South, Nigeria. Similarly displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between process innovation capability and sales volume of indigenous oil and gas companies in South-South, Nigeria.

H_{o2}: There is no significant relationship between process innovation capability and profitability of indigenous oil and gas companies in South-South, Nigeria.

Table 1 also shows a Spearman Rank Order Correlation Coefficient (rho) of 0.793 on the relationship between process innovation capability and profitability. This value implies that a strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in profitability was as a result of the adoption of process innovation capability. Therefore, there is a strong positive correlation between process

innovation capability and profitability of Indigenous Oil and Gas companies in South-South, Nigeria. Also displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between process innovation capability and profitability of indigenous oil and gas companies in South-South, Nigeria.

H_{o3}: There is no significant relationship between process innovation capability and growth of indigenous oil and gas companies in South-South, Nigeria.

Furthermore, Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.595 on the relationship between process innovation capability and growth. This value implies that a moderate relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in growth was as a result of the adoption of process innovation capability. Therefore, there is a moderate positive correlation between process innovation capability and growth of Indigenous Oil and Gas companies in South-South, Nigeria. Also displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between process innovation capability and growth of indigenous oil and gas companies in South-South.

Discussion of Findings

The findings revealed that there is a positive significant relationship between process innovation capability and performance of indigenous oil and gas companies in South-South, Nigeria. This finding agrees with the empirical study of Xie, Hoang and Zhu (2022) who investigated the relationship between green process innovation and financial performance: The role of green social capital and customers' tacit green needs. The study found that that green process innovation has a U-shaped impact on firms' financial performance, such that the impact is initially negative but then becomes more positive as the level of green process innovation increases. To further support this findings Kowo, Akinbola and Akinrinola (2018) conducted a study on the impact of process innovation on organisational performance. The study found out that process innovation has a significant effect on organisational performance and there exists a significant relationship between service modification and sales volume.

Also, this study's finding supports the works of Ahiauzu, Uche and Jaja (2015) who carried out a study on process innovation and organizational resilience in public universities in South-South Nigeria. The results showed a significant association between process innovation and the measures of organizational resilience which are: situation awareness, keystone vulnerability and adaptive capacity. To further support this, Atalay, Anafarta and Sarvan (2013) undertook a study that examined the relationship between innovation and firm performance: An empirical evidence from Turkish automotive supplier industry. Analysis results demonstrated that technological innovation (product and process innovation) has significant and positive impact on firm performance, but no evidence was found for a significant and positive relationship between non-technological innovation (organizational and marketing innovation) and firm performance.

5.0 Conclusion

Therefore, the study concludes that an improvement in process innovation will lead to improved performance of indigenous oil and gas companies in the South-South, Nigeria. Similarly, market innovation was a key driver for the performance indigenous oil and gas companies in the South-South, Nigeria.

6.0 Recommendation

The study recommends that the management of indigenous oil and gas companies should stipulate policies that provide and enhance platforms for process innovation so as to improve their performance. There is need also to invest in process innovation strategies that would optimize the HR practices around innovation, resource mobilization, revenue allocation and monitoring and evaluation to ensure efficiency in the innovation practices.

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