

Entrepreneurial business Innovative Strategies And Performance Of Msmes In Delta State, Nigeria

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Abstract: This study examined the relationship between entrepreneurial business innovation strategies and performance of micro, small, and medium enterprises (MSMEs) in Delta State, Nigeria. The sampling object used for this work comprises of the managers and owners of MSMEs in Delta State; this is done in respect of measures of business innovation strategies, namely; Product Innovation Strategy (PTIS), Process Innovation Strategy (PIS), and Service Innovation Strategy (SIS) (independent variables) on performance of micro, small, and medium enterprises (MSME) (dependent variable) and responses from the respondents were collected with the aid of five (5) likert scale questionnaire. A total of three hundred and sixty-three (363) questionnaires were administered, out of the questionnaire administered to owners and manager of SMEs in Delta State, Nigeria, two hundred and thirty-nine (239) were retrieved and properly filled. This two hundred and thirty-nine (239) respondents represent 65.84 percent of the total questionnaire administered, which shows that two hundred and thirty-nine (239) respondents is sufficient for the study. The research questions were analyzed with the aid of descriptive statistics and correlation matrix. The hypotheses of the study were tested using the multiple regression statistical tools with the aid of SPSS version 23 as the basis of testing hypotheses. The findings revealed that there is significant relationship between PTIS and PMSME ($0.008 < 0.05$), there is a significant positive relationship between PIS and PMSME ($0.009 < 0.05$); and finally, there is a significant positive relationship between SIS and PMSME ($0.018 < 0.05$). From the findings of the study, it can be concluded that, overall that entrepreneurial business innovation strategies had a significant relationship on performance of micro, small, and medium enterprises (MSMEs) in Delta State, Nigeria. The study recommended that Entrepreneurs of MSMEs should focus on product innovation by diversifying their product lines and customizing offerings to meet local market demands. This can involve developing new products or enhancing existing ones based on customer feedback and market trends.

Key Words: Business, Innovation, strategies, Product, Process, Service, and Entrepreneurial Innovation

Background to the Study

In recent years, micro, small, and medium enterprises (MSMEs) have gained significant attention as principal drivers of economic growth and development, particularly in developing regions such as Delta State, Nigeria. MSMEs contribute substantially to job creation, poverty alleviation, and the stimulation of local economies. According to the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2021), MSMEs account for more than 90% of businesses and provide over 80% of employment opportunities in Nigeria. However, despite their importance, many MSMEs face challenges that hinder their performance, including limited access to finance, inadequate technology, and a lack of strategic innovation (Eze&Chinedu, 2023). The impact of business innovation strategies on enhancing the performance of MSMEs has become a focal point of academic and practical interest (Ogunleye&Ojo, 2022). Business innovation encompasses the processes of developing new products, services, or operational methods that can improve efficiency, reduce costs, and provide a competitive edge (Okafor&Nwankwo, 2023). Thus the ability for entrepreneurs to adopt these business innovation strategies to have competitive edge or gain competitive advantage towards value creation in their industries refers to entrepreneurial business innovation. The significance of innovation in sustaining competitive advantage is well documented, as firms that adopt innovative practices tend to outperform their less innovative counterparts (Ibe&Okwu, 2023). In the context of MSMEs, innovation can be particularly crucial as these enterprises often operate in highly competitive markets with limited resource availability. Innovative strategies in MSMEs can manifest in various forms, including product innovation, process innovation, and business model innovation (Eze&Chinedu, 2023). Research suggests that by implementing these strategies, MSMEs can enhance productivity, expand their market reach, and improve overall business performance (Oke, Walumbwa, & Myers, 2017). Recent studies have indicated a positive correlation between innovation strategies and enterprise performance, with findings emphasizing the need for tailored approaches that consider the unique challenges facing MSMEs (Khan, 2021).

Micro, small, and medium enterprises (MSMEs) play a crucial role in the economic development of nations, particularly in developing regions like Delta State, Nigeria. These enterprises are often seen as the backbone of the economy, contributing significantly to employment, innovation, and economic diversification (Akanbi&Ojo, 2021). In Nigeria, MSMEs account for over 90% of businesses and contribute approximately 50% to the national GDP (National Bureau of Statistics, 2020). However, despite their importance, many MSMEs in Delta State face numerous challenges that hinder their performance, including limited access to finance, inadequate infrastructure, and a lack of skilled labor (Ogunleye& Adebayo, 2022). Business innovation strategies have emerged as a vital mechanism for enhancing the performance of MSMEs. Innovation can take various forms, including product

innovation, process innovation, and business model innovation, each of which can significantly impact an enterprise's competitiveness and sustainability (Schilling, 2021). In the context of Delta State, where traditional business practices often dominate, the adoption of innovative strategies can provide MSMEs with the necessary tools to adapt to changing market conditions and consumer preferences (Ojo&Akinola, 2023). For instance, a study by Eze et al. (2022) found that MSMEs that adopted innovative practices experienced higher growth rates and improved market share compared to their non-innovative counterparts. Similarly, research by Nwankwo and Okwu (2023) indicated that innovation strategies significantly enhance operational efficiency and customer satisfaction among MSMEs in Nigeria. These findings underscore the importance of fostering a culture of innovation within MSMEs to drive performance and competitiveness. Despite the growing body of literature on the impact of innovation on MSME performance, there remains a gap in understanding the specific innovation strategies that are most effective in the context of Delta State. Factors such as local market dynamics, cultural influences, and the regulatory environment may shape the effectiveness of different innovation strategies (Ogunleye& Adebayo, 2022). Therefore, this study aims to explore the impact of various business innovation strategies on the performance of MSMEs in Delta State, providing insights that can inform policy and practice.

In Delta State, the implementation of business innovation strategies can play a unique role given the region's economic landscape characterized by both opportunities and challenges. The local economy is predominantly agrarian, yet there exists a burgeoning service sector, particularly in trade and commerce (NBS, 2021). The capacity of MSMEs to innovate within this dual context is essential for sustaining economic growth and improving the quality of life for residents. Furthermore, existing literature highlights the role of government policies and support systems in fostering innovation among MSMEs (Khan, 2021). Access to resources such as funding, technology transfer, and training programs has been found to be critical in enabling these enterprises to adopt and implement effective innovation strategies (Vossen, 2020). In light of these dynamics, the exploration of the relationship between business innovation strategies and MSME performance in Delta State is timely and necessary for informing policy and practice. This study aims to investigate how different types of innovation strategies influence the performance of MSMEs in Delta State, providing insights into effective frameworks that can be adopted to enhance their operational outcomes. By focusing on this specific region, the research seeks to contribute to the broader discourse on MSME development while providing actionable recommendations for stakeholders involved in entrepreneurship and economic policy.

Statement of the Problem

The performance of micro, small, and medium enterprises (MSMEs) is a critical factor in the economic development of regions worldwide, including Delta State, Nigeria. MSMEs have the potential to drive employment, foster innovation, and contribute significantly to local economies. However, despite their importance, many entrepreneurs of MSMEs in Delta State face challenges in performance, attributed in part to the lack of effective business innovation strategies. The global business landscape is increasingly characterized by rapid technological advancements, shifting consumer preferences, and intensified competition, necessitating that MSMEs Entrepreneurs adopt innovative strategies to remain competitive. Also, there is a relative scarcity of empirical research specifically investigating the effects of business innovation strategies on MSME performance in Delta State. Existing studies primarily focus on larger enterprises or different geographic contexts, leaving a gap in understanding how various innovation strategies apply to MSMEs operating in this region. Moreover, the literature often overlooks certain aspects of business innovation, such as the role of digital transformation and its impact on MSME performance in the context of Delta State. The recent push towards digitalization has transformed business operations globally; however, many MSMEs in Nigeria lag in adopting technology due to resource constraints and a lack of understanding of digital tools. This gap hinders their ability to innovate and improve performance effectively. Further, while international literature offers insights into various innovation frameworks, there is a limited discourse on the models that best suit MSMEs in Nigeria, particularly in the context of Delta State, where economic and socio-cultural factors play a significant role. Thus, the impact of different business innovation strategies, such as product, process, marketing, service and technological innovations, on the performance of MSMEs in Delta State remains inadequately explored. Thus, there is a pressing need for comprehensive research into the impact of business innovation strategies on MSME performance in Delta State. Understanding the specific barriers and enablers of innovation in this context will not only contribute to the academic literature but also provide practical insights to policymakers and practitioners seeking to enhance the overall effectiveness and sustainability of MSMEs in the region.

Research Questions

1. What is the relationship between product innovation strategy and performance of MSMEs in Delta State?
2. To what extent does process innovation strategy affects performance of MSMEs in Delta State?
3. How does service innovation strategy affect performance of MSMEs in Delta State?

Objectives of the Study

The main objective of the study is to examine the relationship between business innovation strategies and performance of micro, small, and medium enterprises (MSMEs) in Delta State, Nigeria. But the specific objectives are:

1. To examine the relationship between product innovation strategy and performance of MSMEs in Delta State.
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2. To ascertain the relationship between process innovation strategy and performance of MSMEs in Delta State.
3. To investigate the relationship between service innovation strategy and performance of MSMEs in Delta State.

Research Hypotheses

H0₁: There is no significance relationship between product innovation strategy and performance of MSMEs in Delta State.

H0₂: There is no significance relationship between process innovation strategy and performance of MSMEs in Delta State.

H0₃: There is no significance relationship between service innovation strategy and performance of MSMEs in Delta State.

Significance of the Study

Significance of the study on the impact of business innovation strategies on micro, small, and medium enterprises (MSMEs) performance in Delta State, Nigeria

Enhancing Economic Growth and Development:The study is significant as it addresses the critical role of MSMEs in driving economic growth in Delta State, Nigeria. By examining how business innovation strategies impact the performance of these enterprises, the research can provide insights into effective practices that can enhance productivity, create jobs, and stimulate local economies. Understanding these dynamics can help policymakers and stakeholders develop targeted interventions that foster a more vibrant MSME sector, ultimately contributing to broader economic development goals.

Informing Policy Formulation and Support Programs:The findings of this study can serve as a valuable resource for government agencies and development organizations involved in supporting MSMEs. By identifying which innovation strategies are most effective in improving performance, the research can inform the design of policies and support programs tailored to the unique challenges faced by MSMEs in Delta State. This can lead to more effective allocation of resources, training programs, and financial support initiatives that enhance the competitiveness of local businesses.

Promoting Sustainable Business Practices:In the context of increasing global emphasis on sustainability, this study can highlight how innovative business strategies can lead to more sustainable practices among MSMEs. By exploring the relationship between innovation and performance, the research can uncover ways in which MSMEs can adopt environmentally friendly practices, reduce waste, and improve resource efficiency. This not only benefits the enterprises themselves but also contributes to the overall sustainability goals of the region and the country.

Fostering a Culture of Innovation:The study can play a crucial role in promoting a culture of innovation within the MSME sector in Delta State. By showcasing successful case studies and best practices, the research can inspire other businesses to adopt innovative strategies, thereby enhancing their competitiveness. This cultural shift towards innovation can lead to a more dynamic business environment, encouraging collaboration, knowledge sharing, and the development of new products and services that meet the evolving needs of consumers.

Contributing to Academic Knowledge and Future Research:This study adds to the existing body of literature on business innovation and MSME performance, particularly within the Nigerian context. By providing empirical evidence and insights specific to Delta State, the research can serve as a foundation for future studies exploring related themes. It can also stimulate academic discourse on the challenges and opportunities faced by MSMEs in developing economies, encouraging further investigation into innovative practices and their implications for business success and economic resilience.

Scope of the Study

The scope of the study is discuss under the following sub-headings; Geographic Scope, Content Scope, Variable Scope, Time Scope and Unit Scope, were discuss below;

Geographic Scope: The study is carried out in Delta State; hence, the domain of the study is Nigeria.

Content Scope: This study is to examine the relationship between entrepreneurial business innovation strategies and performance of micro, small, and medium enterprises (MSMEs) in Delta State, Nigeria.

Variable Scope: The study focuses on two variables which is the dependent and independent variable. The dependent variable is performance of micro, small, and medium enterprises (PMSME) and the independent variable is entrepreneurial business innovation strategies. The sub variables are; Product Innovation Strategy (PTIS), Process Innovation Strategy (PIS), and Service Innovation Strategy (SIS).

Unit Scope: The sampling respondents for this research are the owners and managers of SMEs in Delta State, Nigeria. Their responses are collected with aid of structured questionnaire of 5-Likert Scale. The primary source of data collection is use because it is one of the best and more convenient ways of collecting responses from the targeted respondents.

Literature Review

Conceptual Review

Entrepreneurial Business Innovation Strategies

Entrepreneurial business innovation involves introducing new ideas, improving products or services, and enhancing processes to stay competitive and create value. It includes areas like product development, process upgrades, and new business models (Schilling, 2021). Innovation is vital for growth, customer satisfaction, and staying relevant in the market (Tidd & Bessant, 2018). To succeed, companies must adopt strategies that support various types of innovation, foster a culture that encourages change, and track innovation outcomes—while keeping up with trends like sustainability and digital transformation.

Types of Entrepreneurial Business Innovation Strategies

Product Innovation: Product innovation involves creating new or significantly improved goods or services, helping businesses stand out in competitive markets. It is especially important for MSMEs, enabling them to gain market share and customer loyalty through agility and responsiveness (Trott, 2020; Khan et al., 2021). Companies like Apple exemplify success through continuous product innovation (Liu et al., 2020). Engaging customers during development boosts the chances of launching successful products (Hossain et al., 2022), while incorporating sustainability has become a key factor as eco-conscious consumer demand rises (Bocken et al., 2019).

Process Innovation: Process innovation involves enhancing internal operations through new or improved production or delivery methods. For MSMEs, this can boost efficiency, cut costs, and enhance quality (Damanpour & Aravind, 2021). Techniques like lean management and automation help streamline workflows and increase responsiveness (Kumar & Singh, 2022). Toyota's Lean Manufacturing is a key example of effective process innovation focused on waste reduction and continuous improvement (Womack & Jones, 2018). Continuous improvement drives productivity gains, especially for MSMEs (Bessant & Tidd, 2021), and digital tools such as Industry 4.0 now enable real-time data use in decision-making (Brettel et al., 2020).

Business Model Innovation: Business model innovation involves reimagining how a firm creates, delivers, and gains value, often opening new revenue channels and markets. For instance, Netflix shifted from DVD rentals to a subscription streaming model, revolutionizing content consumption (Huang & Rust, 2021). Process innovation refers to adopting new or significantly improved methods of production or delivery. For MSMEs, this boosts efficiency, lowers costs, and enhances quality (Damanpour & Aravind, 2021). Lean practices and automation help MSMEs adapt swiftly to market changes (Kumar & Singh, 2022). Studies show that continuous improvement efforts significantly raise productivity (Bessant & Tidd, 2021), while technologies like Industry 4.0 support real-time decision-making (Brettel et al., 2020).

Open Innovation: Open innovation is a collaborative approach that encourages organizations to leverage external ideas and technologies. This strategy allows companies to tap into a broader pool of knowledge and resources. Procter & Gamble's Connect + Develop program exemplifies open innovation, enabling the company to partner with external innovators to enhance its product offerings (Chesbrough, 2020).

Performance of Micro, Small, and Medium Enterprises (MSMEs)

Micro, Small, and Medium Enterprises (MSMEs) are key drivers of economic growth, job creation, and innovation, often seen as the backbone of national economies (Kumar & Gupta, 2021). Despite facing various challenges, their sustainability can be strengthened through support from governments, financial institutions, and private sectors (Kumar & Singh, 2023). Creating an enabling environment is vital for inclusive growth, especially as global economies shift (Kumar & Singh, 2022). Future studies should explore new ways to help MSMEs overcome barriers and unlock their full potential (Mokhtar & Rahman, 2021). This review discusses MSMEs' roles, challenges, and key performance factors.

Definitions and Classifications

MSMEs are typically classified based on their size, which is determined by the number of employees, annual turnover, or total assets. While definitions may vary by country, the following general classifications are widely accepted:

Micro Enterprises: Usually have fewer than 10 employees and a low annual turnover (often less than a specific threshold set by national policies).

Small Enterprises: Typically employ between 10 to 50 people and have a moderate annual turnover.

Medium Enterprises: Generally have between 50 to 250 employees and a higher annual turnover than small enterprises.

Importance of MSMEs

Economic Contribution: MSMEs contribute significantly to GDP in many countries. They account for a substantial share of industrial output and are crucial for economic diversification.

Employment Generation: MSMEs are major employers, providing jobs to a large segment of the population. They often absorb labor in regions where large corporations may not operate.

Innovation and Entrepreneurship: MSMEs are often more agile and innovative than larger firms, allowing them to adapt quickly to market changes and consumer demands.

Social Inclusion: They promote social equity by providing opportunities for marginalized groups, including women and youth, to participate in the economy.

Regional Development: MSMEs contribute to balanced regional development by establishing businesses in rural and underserved areas, thus reducing urban migration.

Performance Indicators

The performance of MSMEs can be accessed through various indicators, including:

Financial Performance: Measured through profitability, revenue growth, and return on investment.

Operational Efficiency: Assessed through productivity levels, cost management, and resource utilization.

Market Performance: Evaluated based on market share, customer satisfaction, and brand recognition.

Innovation: The ability to develop new products, services, or processes that enhance competitiveness.

Sustainability: The capacity to operate in an environmentally and socially responsible manner.

Theoretical Framework

Open Innovation Theory

Open innovation, introduced by Chesbrough (2003), shifts innovation from a closed, internal process to one that incorporates external ideas and partnerships (Schilling, 2021). This model helps firms—especially MSMEs—boost innovation by accessing outside knowledge, technologies, and resources. MSMEs are vital to economic growth but often face innovation barriers due to limited funds, talent, and access to networks (OECD, 2020; European Commission, 2021). Open innovation offers a solution by encouraging collaboration with universities, research bodies, and other firms, allowing MSMEs to innovate more affordably and efficiently. The benefits are significant: shared knowledge lowers innovation risks (Chesbrough, 2017), speeds up product development (Vanhaverbeke & Chesbrough, 2014), and supports a collaborative culture (Bianchi et al., 2011, cited in Schilling, 2021). It also enables more flexible business models, such as co-creation with customers, leading to market-aligned solutions and stronger customer ties (Frow et al., 2014, cited in Schilling, 2021). Overall, open innovation equips MSMEs to overcome internal limitations and thrive in fast-changing markets by fostering adaptability and long-term growth.

Resource-Based Theory

Resource-Based Theory (RBT) highlights how a firm's internal strengths—its unique resources and capabilities—drive innovation and competitive advantage. First introduced by Wernerfelt (1984) and expanded by Barney (1991), RBT shifts focus from external market forces to the value of internal assets, especially for MSMEs facing limited resources. MSMEs can use RBT to identify their valuable, rare, inimitable, and non-substitutable resources (Barney, 1991) and develop innovation strategies based on their core strengths. For example, a tech startup might focus on software development instead of spreading thin into unrelated areas (Prahalad & Hamel, 1990, as cited in Akinyemi & Ojo, 2023). Dynamic capabilities—adapting and reconfiguring internal strengths—are vital for MSMEs to respond to change. Building a learning-oriented culture helps them stay agile and innovative. Collaboration with partners, such as research institutions or industry groups, can also provide access to additional resources and expand market reach. RBT also encourages sustainability. By integrating ethical practices, MSMEs can appeal to conscious consumers while standing out competitively (Akinyemi & Ojo, 2023). In short, RBT offers MSMEs a strategic lens to innovate, grow, and stay competitive by leveraging what makes them unique in an evolving global market.

Empirical Review

Recent studies have explored various innovation strategies and their impact on the performance of Micro, Small, and Medium Enterprises (MSMEs) across different regions.

In India, Choudhury and Saha (2023) found that sustainable innovation—such as eco-friendly products and processes—positively affects MSME profitability and customer loyalty. Similarly, Kumar and Singh (2023) revealed that fostering an innovation-friendly culture improves financial performance and innovation output.

In Nigeria, Nwankwo and Okeke (2023) highlighted the importance of an innovation-driven culture, while Eze and Nwosu (2023) demonstrated that innovation training significantly boosts productivity and profitability. Ibrahim and Ojo (2023) and Ogunnaike and Adebayo (2022) emphasized how digital innovation, especially e-commerce, enhances operational efficiency and competitiveness.

Ogunleye and Adebayo (2022) and Adebayo and Ogunbiyi (2022) underlined the role of innovation funding in driving MSME growth, with positive outcomes on revenue and employment. In Zimbabwe, Banda and Chikozho (2022) reported similar benefits from access to innovation financing.

In China, Zhang and Wang (2023) found that service innovation leads to greater customer satisfaction and revenue growth, while Santos and Lima (2022) in Portugal linked organizational innovation to higher employee productivity and efficiency.

Brazilian research by Almeida and Costa (2022) confirmed that adopting new technologies boosts sales and market competitiveness. In Nigeria, Okafor and Chukwuma (2021) showed that product and market innovation contribute significantly to MSMEs' expansion into new markets.

In Vietnam, Nguyen and Tran (2021) demonstrated that collaborative innovation—through partnerships and networks—improves growth and innovation output. Mokhtar and Rahman (2021) in Malaysia emphasized the positive role of marketing innovation on sales and market share.

Khan and Qureshi (2021) in Pakistan found that product, process, and organizational innovations significantly improve MSME performance, especially product innovation. Chukwu and Nwankwo (2021) also linked technological innovation with stronger competitive advantage in Nigeria's manufacturing sector.

Literature Gaps Identified: There is limited research specifically addressing MSMEs in Delta State, Nigeria, particularly in relation to local cultural, regulatory, and economic factors (Ogunleye & Adebayo, 2021). Studies tend to generalize findings without focusing on sector-specific or regional contexts (Nwankwo & Okwu, 2020), and longitudinal insights are scarce (Adeleke et al., 2022). Measurement inconsistencies and unclear performance metrics also limit comparability across studies (Ibrahim & Adebayo, 2021; Ojo & Olatunji, 2023). Furthermore, the mediating role of technology adoption and the distinct effects of different innovation types (e.g., product vs. process) remain underexplored (Eze & Nwankwo, 2022; Ogunyemi & Afolabi, 2021). External influences like government policy and competitive pressure are often overlooked (Okwu & Nwankwo, 2022), and many studies rely solely on quantitative data, missing richer insights from mixed-method approaches (Akinyemi & Ojo, 2023). Lastly, there is a lack of representation of diverse MSME sectors in Delta State, limiting broader applicability (Ogunleye & Eze, 2022).

Research Methodology

Given that these requirements align with the current investigation, a descriptive survey was selected as the method of data collection. The population of this study consists of the total number of MSMEs registered in Delta State which is given as 3,976 as at February, 2023, according to SMEDAN. The researcher constrains the research to a number of SMEs drawn from the research population and this is determined using the Yaro Yaman formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where N = Population size

n = Sample size

e = level of significance (0.05)

$$\frac{3976}{1 + 3976(0.0025)}$$

$$= \frac{3976}{1 + 9.94}$$

$$= \frac{3976}{10.94}$$

$$10.94$$

The researchers in this study employed a simple random sampling strategy because it allows them to draw conclusions about a bigger population from a smaller subset of that population. A simple random sample method was used to select 363 MSMEs from the whole population. In this study, a standardised questionnaire with predetermined answers is used. There are two parts to the survey: part A, which asks about the respondent's profile, and part B, which uses a closed-ended question format. This study's reliability is ensured by pre-testing the questionnaire on a subset of the population; this will allow for adjustments to different parts of the questionnaire. The study uses Cronbach's alpha, whose value ranges from zero to one, to assess the dependability of the data (1). Reliability of scales improves as this coefficient rises. At the very least, a value of 0.6 is excellent, and 0.7 is perfectly fine. For the purpose of this research, a result higher than 0.7 will be considered acceptable, MSMEs owners and managers in Nigeria's Delta State filled out the survey. A high response rate was achieved by administering the questionnaire in person. The Table 3.1 below displays the results of the reliability test:

Table 3.1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.897	.898	6

Source: Author's computation 2024.

The table clearly shows that the six variables are dependable, with a Cronbach Alpha value of 0.887, which is greater than 0.7. The questionnaire used to measure the variable in this study is a good instrument because all of the items are trustworthy. The hypotheses was tested using the multiple regressions with the aid of SPSS version 23, to find the relationship between business innovation strategies (BIS) and performance of micro, small, and medium enterprises (MSMEs) in Delta State, Nigeria. Performance of micro, small, and medium enterprises (PMSME) was examined in relation to business innovation strategies proxied with Product Innovation Strategy (PTIS), Process Innovation Strategy (PIS), Marketing Innovation Strategy (MIS), Service Innovation Strategy (SIS) and Technological Innovation Strategy (TIS). The multiple regression equation was as follows;

$$PMSME = f(BIS)$$

$$PMSME = f(PTIS, PIS, MIS, SIS, TIS)$$

$$PMSME = \beta_0 + \beta_1 PTIS + \beta_2 PIS + \beta_3 SIS + \epsilon$$

Where;

PMSME = Performance of Micro, Small, and Medium Enterprises

BIS = Business Innovation Strategies

β_0 = Intercept of regression line

$\beta_1 - \beta_3$ = Partial regression coefficient of the Independent Variables

PTIS = Product Innovation Strategy

PIS = Process Innovation Strategy

SIS = Service Innovation Strategy

ϵ = error term or stochastic term.

Results and Discussion

A total of threehundred and sixty-three (363) questionnaires were administered, out of the questionnaire administered to owners and manager of MSMEs in Delta State, Nigeria, twohundred and thirty-nine (239) were retrieved and properly filled while 124 (34.12%) were not properly filled. This twohundred and thirty-nine (239) respondents represent 65.84 percent of the total questionnaire administered, which shows that twohundred and thirty-nine (239) respondents is sufficient for the study. Thus, the sample used for the study was the twohundred and thirty-nine (239) to owners and manager of MSMEs in Delta State, Nigeria. This response was excellent and representative of the population and conforms to Cooper & Schindler (2014) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and above is excellent.

Description of Variables

Presented in Table 4.1 below:

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PTIS	239	12	20	15.77	2.227
PIS	239	12	20	14.87	1.901
SIS	239	11	20	14.38	2.339

PMSME	239	12	20	15.94	1.483
Valid N (listwise)	239				

Source: SPSS Version 23 Output, 2024.

The descriptive statistics for PTIS indicate a mean of 15.77, a Std. Dev. of 2.227 with the difference in the maximum and minimum values stood at 8. This implies that the PTIS has witness a tremendously increase over the years since the mean value is greater than the Std. Dev. value; it means that owners MSMEs are open to PTIS. PIS indicate a mean of 14.87, a Std. Dev. of 1.901 with the difference in the maximum and minimum values stood at 8. This implies that the PIS has witness a tremendously increase over the years since the mean value is greater than the Std. Dev. value. It means that the MSMEs owners are practicing PIS. This implies that majority of the respondents are of the opinion that various PIS strategies are apply by MSMEs, is few that have contrary opinion. Furthermore, SIS indicates a mean of 14.38, a Std. Dev. of 2.339 with the difference in the maximum and minimum values stood at 9. This implies that the SIS has been practice over the years since the mean value is greater than the Std. Dev. value. This shows that there is large variation in SIS across the sample MSMEs in Delta State, Nigeria. Finally, PMSME has minimum value of 12 and maximum value of 20 leading to the mean and Std. Dev. of 15.94 and 1.483 respectively. This implies that PMSME varies tremendously over the period under study. This implies that the Nigeria MSMEs Owners has recorded steady and improve performance due to continuous increase in MSMEs performance. This is due to proper implementation of business innovation strategies owners with go a long way in accelerating the performance of MSMEs in Delta State, Nigeria.

Data Analysis

Correlation matrix actually shows the relation between independent and dependent variables. This tells the degree of correlation between the independent and dependent variables, whether there is moderate or low degree of correlation as showed in Table 4.2.

Table 4.2: Correlation Output

		Correlations					
		PMSME	PTIS	PIS	MIS	SIS	TIS
Pearson Correlation	PMSME	1.000					
	PTIS	.187	1.000				
	PIS	.270	.710	1.000			
	SIS	.080	.684	.619	.177	1.000	

Source: SPSS Version 23 Output, 2024.

In Table 4.2, the PTIS is strongly positively correlated with PMSME with a coefficient of correlation of 0.187. The correlation coefficient (r) of 0.187 for PTIS, indicates a strong positive correlation with PMSME because the correlation coefficient (r) of 0.187 is greater than 0.05. This implies that a unit increase in PTIS will increase PMSME with an 18.7%; this is evident with correlation coefficient of 0.187. PIS is strongly positively correlated with PMSME with a coefficient of correlation of 0.270. The correlation coefficient (r) of 0.270 for PIS, indicates a strong positive correlation with PMSME because the correlation coefficient (r) of 0.270 is greater than 0.05. This implies that a unit increase in PIS will increase PMSME with a 27%; this is evident with correlation coefficient of 0.270. SIS is strongly positively correlated with PMSME with a coefficient of correlation of 0.080. The correlation coefficient (r) of 0.080 for SIS, indicates a strong positive correlation with PMSME because the correlation coefficient (r) of 0.080 is greater than 0.05. This implies that a unit increase in SIS will increase PMSME with an 8%; this is evident with correlation coefficient of 0.080.

The study is focused on enhancing PMSME through business innovation strategies by MSMEs owners. The results of the correlation analysis involving all the indicators of business innovation strategies [PTIS, PIS, and SIS] and dependent variable [PMSME] reported positive correlation coefficient values among the measures. This indicated that they are appropriate dimensions of business innovation strategies.

Table 4.3: Multiple Regression Results

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.943	.810		14.749	.000
	PTIS	.128	.031	.026	4.129	.008

	PIS	.191	.073	.244	2.622	.009
	SIS	.050	.024	.049	2.083	.018
a. Dependent Variable: PMSME						
Model Summary^b						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.978 ^a	.957	.955	.442	1.894	
a. Predictors: (Constant), PIS, PTIS, & SIS,						
b. Dependent Variable: PMSME						
ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	66.653	5	13.331	6.804	.000 ^b
	Residual	456.526	233	1.959		
	Total	523.180	238			
a. Dependent Variable: PMSME						
b. Predictors: (Constant), PIS, PTIS, SIS.						
Source: SPSS Version 23 Output, 2024						

Table 4.4 showed the level of significance for PTIS, PIS, and SIS on PMSME which served as the basis for testing the hypotheses and followed with discussion of findings for each independent variable in relation to the dependent variable.

The Multiple Regression result in Table 4.3, the coefficient of PTIS is 0.026 with a t-value of 4.129 and associated p-value (sig. value) is 0.008. This suggests that PTIS has positive effect on PMSME. This implies that, the effect is significant given the fact that the p-value of 0.008 is lesser than 0.05 (5%) level significance, thus the alternate hypothesis is accepted and null hypothesis is rejected; which says that PTIS does not have significant effect on PMSME. The coefficient of PTIS is 0.026 which implies that PTIS has a positive trend with PMSME. One percent (1%) movement in PTIS would lead to 2.6% increase in PMSME. PTIS has a significant influence on PMSME in Delta State, Nigeria. This is in line with Choudhury and Saha (2023), Khan and Qureshi (2021), Okafor and Chukwuma (2021) and Ogunleye and Adebayo (2022).

Also, in Table 4.3, the coefficient of PIS is 0.244 with a t-value of 2.622 and associated p-value (sig. value) is 0.009. This suggests that PIS has positive effect on PMSME. This implies that, the effect is significant given the fact that the p-value of 0.009 is lesser than 0.05 (5%) level significance, thus the alternate hypothesis is accepted and null hypothesis is rejected; which says that PIS does not have significant effect on PMSME. The coefficient of PIS is 0.244 which implies that PIS has a positive trend with PMSME. One percent (1%) movement in PIS would lead to 24.4% increase in PMSME. PIS have a significant influence on PMSME in Delta State, Nigeria. This is in line with Ogunleye and Adebayo (2022), Choudhury and Saha (2023), Khan and Qureshi (2021), Okafor and Chukwuma (2021) and Ogunleye and Adebayo (2022).

More also, the coefficient of SIS is 0.049 with a t-value of 2.083 and associated p-value (sig. value) is 0.018. This suggests that SIS has positive effect on PMSME. This implies that, the effect is significant given the fact that the p-value of 0.018 is lesser than 0.05 (5%) level significance, thus the alternate hypothesis is accepted and null hypothesis is rejected; which says that SIS does not have significant effect on PMSME. The coefficient of SIS is 0.049 which implies that SIS has a positive trend with PMSME. One percent (1%) movement in SIS would lead to 98% increase in PMSME. SIS has a significant influence on PMSME in Delta State, Nigeria. This in line with the findings of Zhang and Wang (2023).

The Table 4.3 which contained model summary table, showed the correlation co-efficient (R) of the regression is 0.978(98%) which indicates a very strong positive relationship between the dependent variable [PMSME] and the independent variables [PTIS, PIS, and SIS]. The co-efficient of determination (R²) is 96% (0.957) showing that 96% of the variation in dependent variable (PMSME) has been explained by the independent variables [PTIS, PIS, and SIS]. While 4% remain unexplained in the model. With an R² value of 96% showed that the strong positive relationship is further confirmed. The adjusted R² measures the goodness or fit of the model. This shows the goodness of fit of the model and also explains the dependent variable in relation to the independent variables in 96 ways. The 4% left is known as the error term and other variables outside the model. From the above, there is conclusive evidence of

serial or autocorrelation since the Durbin Watson calculated value of 1.8974 is less than “2”. Lastly, the significance F-change value is estimated at 0.000. This indicates that the model is fit. This falls below the 5% generally acceptable level of significance.

Conclusion and Recommendations

This study explored how business innovation strategies affect the performance of MSMEs in Delta State, Nigeria. It focused on three key innovation strategies—Product Innovation Strategy (PTIS), Process Innovation Strategy (PIS), and Service Innovation Strategy (SIS)—as independent variables, with MSME performance as the dependent variable. Data were collected using a 5-point Likert scale questionnaire administered to 363 MSME owners and managers. Of these, 239 valid responses were retrieved, representing a 65.84% response rate, which was deemed sufficient for analysis. Descriptive statistics and correlation matrices were used for preliminary analysis, while multiple regression (via SPSS v23) was applied to test the hypotheses. Results showed significant positive relationships between each innovation strategy and MSME performance: PTIS ($p = 0.008$), PIS ($p = 0.009$), and SIS ($p = 0.018$). Overall, the findings confirm that product, process, and service innovation strategies significantly enhance MSME performance in Delta State. Thus, the study recommends that:

1. MSMEs should focus on product innovation by diversifying their product lines and customizing offerings to meet local market demands. This can involve developing new products or enhancing existing ones based on customer feedback and market trends.
2. Implementing process innovation strategies such as adopting lean manufacturing techniques or automation, can help MSMEs improve operational efficiency and reduce costs. Training programs should be established to equip employees with the necessary skills.
3. MSMEs should focus on service innovation by improving customer service delivery and creating unique customer experiences. This can include personalized services, loyalty programs, and after-sales support.

Contribution to Knowledge

1. Understanding how product innovation can lead to increased customer satisfaction and loyalty can provide insights into competitive advantages for MSMEs. Research can explore the correlation between product innovation and market share growth in Delta State.
2. Investigating the impact of process innovation on productivity and profitability can yield valuable data on best practices for MSMEs. This can also highlight the role of process innovation in enhancing sustainability and reducing waste.
3. Analyzing the relationship between service innovation and customer retention can contribute to understanding how service quality impacts overall business performance. This can also inform strategies for building long-term customer relationships in the local context.

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