

EFFECT OF INNOVATION ON THE PROFITABILITY OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs) IN BIDA METROPOLIS

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Abstract

Micro, small, and medium-sized enterprises (MSMEs), are the foundation of every nation's economy. To assure the necessary rate of economic growth, innovation among micro, small, and medium-sized firms (MSMEs) in Nigeria is essential for their survival. Every micro, small, and medium-sized organization experiences innovation in a variety of areas. They include both process and product innovations. This study examined the effect of innovation on the profitability of Micro, Small and Medium Enterprises (MSMEs) in Bida metropolis. The research method used for the study was survey. A structured questionnaire with a 5-point Likert scale was the instrument utilized. Using a census technique, a sample of fifty-four (54) MSMEs in the Bida local government was chosen. Multiple Regression analysis was used to examine the data collected through surveys. The findings of the regression analysis demonstrate that innovation has a favorable and substantial impact on the success of MSMEs in the Bida metropolitan. The study therefore recommended among others. As a result of innovation's beneficial effects on MSMEs' profitability, Niger State MSMEs have to adopt new products and business innovation. Entrepreneurs and potential entrepreneurs must be open to different innovation strategies. They should be ready to encourage their employees to innovate by empowering them. The government should support the innovation of micro, small and medium-sized enterprises through grants and subsidies.

Keywords: MSMEs, innovation, product, process

1.1 Introduction

Micro, Small, and Medium-sized Enterprises (MSMEs), are the foundation of every nation's economy. To maintain the necessary degree of economic growth, innovation among micro, small, and medium-sized firms (MSMEs) in Nigeria is essential to their survival and expansion (Martin and Namusonge, 2014). Innovations have changed the way organizations do business and meet customer needs in today's society, with micro, small and medium-sized enterprises (MSMEs) accounting for 99.7% of all businesses worldwide (Agarwal and Ashwani, 2018). Innovation occurs in many areas of every small and medium-sized business. They consist of product innovations and process innovations, (Sundbo, 2013).

According to Stefan, Mihai, Alexandra, and Liliana (2020), the Organization for Economic Co-operation and Development (OECD) (2009) defines innovation as the updating and enlarging of products and market portfolios, new design, production, and distribution techniques, as well as the implementation of changes in work organization and workforce skills. This concept acknowledges organizational, technical, and product advances. Innovation is a purposeful, dynamic, and ever-evolving process that produces positive change targeted at enhancing corporate change management and better satisfying consumer demands. It includes a number

of things required to deliver value to customers and provide good performance to the organization. According to Chesbrough (2003), Gassmann (2006), Wim and Henry (2014), innovation is the deliberate influx and outflow of knowledge that speeds up internal innovation and widens the market for using innovation outside of the company.

MSMEs, or micro, small, and medium-sized businesses, are often regarded as engines of economic expansion. Viable MSMEs are considered crucial to solving the multidimensional problems of developing countries. The Central Bank of Nigeria (2018) also defined Nigerian MSMEs based on assets and number of employees. The criteria are; asset base N5-500m and personnel 11-300. Businesses that meet these criteria are therefore called micro, small and medium-sized enterprises (MSMEs). The international foreign exchange market, the Federal Ministry of Industry defined MSMEs as companies with investments in equipment and machinery not exceeding N150,000. The economy has also generally been recognized by micro, small, and medium-sized businesses (MSMEs) as a method of growth and development. Inequality, unemployment, and poverty are issues in emerging nations. Companies that want to expand need to adopt a cutting-edge strategy that gives them a competitive edge in the current economic climate.

There are conflicting findings from studies on the performance of MSMEs and innovation. However, several research (Zwingina and Opusunju, 2017; Azilah & Kamisah, 2020; Alam and Adeyinka, 2021; Mohammad, 2022; Danh, Huong, Thanh and Lai, 2023) indicate a favorable link between them. On the other hand, some conclude that innovation does not affect firm performance (David, Leonardo, Herbert and Eduardo, 2014). It is on this note that this study is designed to analyze the synopsis of innovation on the profitability of MSMEs in Niger State: evidence from Bida metropolis.

1.2 Statement of the Problem

The contribution of MSMEs to the growth of the Nigerian economy has been lower than expected for years (SMEDAN, 2018). MSMEs in Niger state often face innovation challenges to overcome problems such as lack of electricity, lack of capital, weak management skills, insufficient knowledge and corruption. Jahangir and Mohammed (2014) argued that as a result of reduced product and process innovation in Niger state, low productivity of micro, small and medium enterprises led to a decline in economic growth as the share of MSMEs in GDP declined. The poor economic base and the ineffectiveness of the market share of MSMEs in promoting product and process innovation led to low productivity, which did not give MSMEs the opportunity to compete effectively with both factor and product markets to raise the country's GDP to the macroeconomic target.

The link between innovation and the profitability of MSMEs was explored by Sani and Olaniyi (2022), Mohammad (2022), and Abubakar and Hussain (2020). The findings of their study indicates that there is significant relationship and impact between innovation and MSMEs profitability performance. However, these study failed to state the sample size and technique used for their study. Likewise, Danh, Huong, Thanh and Lai (2023) and David, Leonardo, Herbert & Eduardo (2014) in a similar study but failed to use any pre- regression test before testing of hypotheses. In addition, Zwingina & Opusunju (2017) in a comparable study restrict its scope by focusing on the Gwagwalada city, while Nasser, Azilah & Kamisah (2020) likewise refused to utilize any robust method for data analysis and testing of hypotheses. This study aims to close this gap by analyzing the synopsis of innovation's impact on MSMEs' profitability:

evidence from Bida metropolis.

1.3 Objectives of the Study

The study main objective is to conduct and examine the synopsis of Innovation on the Profitability of Micro, Small and Medium Enterprises in Niger State: Evidence from Bida Metropolis. The specific objectives to be achieved are:

- i. To examine the impact of product Innovation on the Profitability of MSMEs in Bida Metropolis; and
- ii. To evaluate the impact of process innovation on the Profitability of MSMEs in Bida Metropolis.

1.4 Research Hypotheses

For the purpose of achieving the stated objectives above, the following working hypotheses were employed. These include;

H₀₁: Product Innovation has no significant impact on the profitability of MSMEs in Bida Metropolis.

H₀₂: Process Innovation has no significant impact on the profitability of MSMEs in Bida Metropolis.

2.0 LITERATURE REVIEW

2.1 Concept of Innovation

The Latin noun "innovatus" and the verb "innovare" are where the term "innovation" originates. According to Johannessen et al. (2001, as Edited and Daiwa, 2020), the definition of the word is to make something new by transforming a concept or procedure into a crucial good or extra service.

According to the OECD Oslo Handbook (2005) in Daiwa (2020), innovation is the process of introducing a new marketing strategy or an organizational approach inside or outside of a company, work, organization, or business entity. It may also be a new and/or considerably enhanced product or service.

A simple definition of innovation is "a new idea, tool, or method". Innovation is frequently viewed as superior solutions that address previously unmet needs, unstated criteria, or market demands. This is accomplished through developing more effective goods, procedures, or business models that are easily accessible to the public, markets, and governments (Shekhar and Priyanka, 2018). According to Abbasi, Motavasseli, Zali, Faghih, and Meigounpoory (2019), innovation is the invention of an idea or deed that is novel to the adopting organization, such as a system, guide, program, device, method, product, or service (Damanpour, 1992).

2.1.1 Elements of

Products, processes, markets, input and organizational innovation are among those cited by Mika (2020) as being recognized by Schumpeter (1934). Schumpeter (1934) highlighted different kinds of innovation, including product innovation.

- i. **Product Innovation:** According to Gopalakrishnan and Damanpour (Gopalakrishnan & Damanpour, 1997 in Langley, et al., 2005 as quoted in Mika,

2020), product innovation is the process of creating a new product from scratch using new materials or modifying an old product to satisfy customers. Product innovation is the result of a confluence of many processes (Mandey, 2018). Product innovation is the capacity to create goods, services, and concepts that help an organization reach its performance objectives and maximize productivity so that it may establish a commanding position in a cutthroat market and adapt more effectively to external changes (Muafi, 2020).

- ii. **Process innovation:** According to Cumming (1998) and Mika (2020), process innovation entails reorganizing and enhancing a company process' internal operations. Engineering, R&D, manufacturing, management, and business are all involved in this process, as well as other areas of a company's activities (Freeman, 1982, quoted in Mika, 2020). Process innovation also refers to altering the way goods or services are produced in an attempt to lower production costs (Ardito, Besson, Petruzzelli & Gregori, 2018). In addition to these three inventions, technological innovation exists.
- iii. **Market Innovation:** John (1999, in Mika, 2020) asserts that market innovation entails modifying the marketing mix and choosing the right markets in order to cater to the preferences of the consumer. Because rivals can reach potential clients throughout the world as quickly as light thanks to the newest marketing techniques, particularly the Internet, the corporation is forced to constantly innovate its marketing strategies.
- iv. **Technological Innovation:** According to Coccia and Watts (2020), technological innovation is based on technology, which is defined as a complex system made up of multiple entities or subsystems of technologies and the relationships that each entity has with at least one other entity in the system to achieve particular goals.

2.2 Concept of MSMEs

Different businesses, sectors, regional economic groups, and nations have varying definitions of MSMEs. The word "MSMEs" refers to a broad variety of measurements and definitions that differ from nation to nation and from source to source of MSMEs data. MSMEs are defined differently by various institutions in Nigeria. These organizations include the Federal Ministry of Industry (FMOI), National Small and Medium Bank Enterprises (NASME), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), Small and Medium Enterprises Equity Investment Scheme (SMIEIS), and Nigerian Institute of Social and Economic Research (NISER).

SMIEIS defines an MSMEs as any industry with an asset base of up to N200 million, excluding land and the working capital of the country, and the number of employees working in the companies with minimum of 10 and a maximum of 300 (Onwe, 2014 in Nwankwo & Ezeibe, 2021). For instance, the CBN defined an MSMEs as an entity with a total cost of capacity (excluding land) of between N2 and 5 million.

According to the National Industry Council's definition of MSMEs (2009 in Nwankwo and Ezeibe, 2021) only commercial firms with a total cost of less than 200,000,000 Naira (N200,000,000.00), excluding land, qualify as MSMEs. Researchers and decision-makers disagree, nevertheless, on the point at which a firm is categorized as micro, small, or medium. Except for the requirement that an industry be defined for a particular purpose, there is no

globally or even nationally accepted standard definition.

2.2.1 Contributions of Micro, Small and Medium Enterprises in Economic Development

Recent discussions among Nigerian governments, policymakers, academics/scholars/researchers, and economists have focused on the role of MSMEs to economic development and employment creation. MSMEs have been acknowledged as having a positive impact in emerging nations like Nigeria. According to Danladi, Ali, and Salish (2021), the following sectors of the economy greatly benefit from the presence of such industries.

- i. **Improve Standard of Living:** The quality of life individuals in a specific community or nation enjoy is referred to as the standard of living. Their financial level has an impact, but so do the kind and amount of products and services they have access to. Micro, Small, and Medium-Sized Enterprises (MSME) provide a substantial contribution to the living standards of the people who live in the society in which they are located, whether they are in the manufacturing industry or the service sector, such as retail, entertainment, etc (Salish, 2021).
- ii. **Capacity Building:** MSMEs give local entrepreneurs the chance to grow, which encourages wealth creation at all levels. It has been established that MSMEs constitute the breeding ground for entrepreneurship, with individual creativity and innovation acting as the engine. They may thus act as the primary training ground for most business entrepreneurs (Salish, 2021).
- iii. **Job Creation:** MSMEs have the ability to create jobs since their operations require more manpower. In comparison to large corporations, their load is far bigger. Additionally, it has been demonstrated that MSMEs globally produce more jobs per unit of investment capital and per unit of energy utilized than large firms. As a result, they have helped some countries reduce their jobless rates. They play a big part in promoting innovation and competition. By being exceptionally creative and adaptable, the MSME sector has survived the present crisis and recession (Salish, 2021).
- iv. **Economic Growth:** MSMEs are another engine for economic expansion. Due to the fact that MSMEs primarily engage in primary and secondary economic activities that are heavily reliant on locally obtained resources. Thus, they accomplish high-value actions that are essential to the expansion and advancement of any economy. They facilitate industrial diffusion since they can readily establish themselves in rural regions and sustain with minimal industrial infrastructure, and as a result, they serve as the primary proponents of industrial decentralization and the development of rural areas that can lessen the rural-urban impact (Salish, 2021).
- v. **Poverty Reduction:** MSMEs are essential in eliminating citizen inequality and poverty. This is independent of its accessibility and the comparatively little startup capital investment needed. It also involves both expert and unskilled work, generating a living. It is crucial to every stage of economic growth (Salish, 2021)

2.3 Review of Empirical Study

Numerous studies on innovation and MSMEs in Nigeria have been conducted. The effect of

financial innovation (FI) on the expansion of micro, small, and medium-sized firms (MSMEs) was, for instance, explored by Sani and Olaniyi in their study from 2022 using data from the North Central States of Nigeria. The purpose of the study is to determine how important for MSMEs the financial aspects of institutional innovation (Insl), process innovation (Prssl), and product innovation are. Data for the study was mostly gathered via replies to a questionnaire distributed to 251 respondents who were owners and workers of 10 SMEs in the North Central Nigerian states of Jos, Lokoja, and Lafia, Plateau, Kogi, and Nasarawa. The reliability of the instrument was assessed using Cronbach's alpha, with an Alpha coefficient larger than 0.6 for each construct. The correlation matrix's findings demonstrated that there is no multicollinearity because all explanatory variables are favorably associated with coefficients below 0.7. Additionally, the regression findings demonstrated that ONM is impacted by all explanatory factors. The coefficient of determination (R²) result shows that the overall influence of the explanatory factors was roughly 56%. The research's recommendations for funding Nigerian MSMEs, particularly in Niger State, can help these businesses become more competitive globally. However, the study failed to state the sampling size they adopted for their study. Therefore, this study intends to fill this gap by using a census approach in selecting the sample size and technique.

The impact of innovation on the profitability performance of micro, small, and medium-sized firms (MSMEs) in Vietnam is examined by Danh, Huong, Thanh, and Lai (2023). In order to examine how innovation affects MSMEs' profitability performance, the study uses data from surveys on SMEs in Vietnam conducted by the Development Economics Research Group at the University of Copenhagen, the World Institute for Development Economics Research at the United Nations University, the Central Institute for Economic Management, and the Institute of Labor Science and Social Affairs. Least squared regressions and 2SLS regressions are used in the analysis. According to the authors, MSMEs with innovation often outperform MSMEs without innovation. The authors go on to demonstrate that an essential kind of innovation in MSMEs, the enhancement of current goods, has a significant beneficial impact on company performance. However, the study used secondary data and fails to use any pre-regression test before testing of hypotheses. This study fills the gap by using Skewness and Kurtosis to test the normality of the data.

By comparing financial data from Serasa and Gazeta Mercantil with innovation data from PINTEC (Technological Innovation Research) of the IBGE (Brazilian Institute of Geography and Statistics), David, Leonardo, Herbert, and Eduardo (2014) examined the relationship between innovation and firms' performance in Brazil. The study employs a quantitative and descriptive methodology and conducts an extensive examination of secondary data. For the years 2000, 2003, and 2005, statistics on company innovation are taken from the PINTEC database, while data on the performance of 4000 firms are taken from Serasa and Gazeta Mercantil. The authors provided this financial information to IBGE, which used the CNPJ (National Corporate Taxpayers' Registry) number to cross-reference it with PINTEC. According to the findings of structural equation modeling, factors related to innovation investments, which are linked to a company's inventive endeavor, do not significantly influence financial success. However, the study used secondary data and fails to use any pre-regression test before testing of hypotheses. This study fills the gap by using Skewness and Kurtosis to test the normality of the data.

The importance of entrepreneurial leadership is discussed in a research by Mohammad

(2022) on innovation and employee creativity in MSMEs. The research examines the connections between MSMEs' business management, creativity, and innovation. The goal is to pinpoint the traits that promote entrepreneurial leadership that supports innovation and creativity in Saudi SMEs. The study is based on primary information gathered from SMEs' owners, managers, and workers in the Saudi Arabian Kingdom's Capital Region. The replies gathered totaled 281 in number. But when it came time for the analysis, just 240.8 replies were still available. The study's findings demonstrate that, in MSMEs, where the coefficient was determined to be significant, entrepreneurial leadership had a favorable impact on organizational innovation and employee creativity. According to research, MSMEs must promote an innovative culture to unlock employee creativity. However, the report omitted to mention the sampling strategy they used. By choosing the sample size and procedure using a census approach, this study aims to close this gap.

Similar to this, Zwingina and Opusunju (2017) looked into how innovation affected the profitability of micro, mid, and medium-sized businesses in Gwagwalada, Abuja. The research looked into how innovations in marketing, processes, and products might boost MSMEs' productivity (sales volume) in Gwagwalada, Abuja. Primary sources have been used to gather up-to-date data for the five-year period 2010-2015. 2,690 SME owners make up this study's main sample. Taro Yamane calculated the sample size, which came to 348. The e-video statistics program used the ordinary least square approach for multiple regression, and the results revealed a substantial correlation between innovation and SME success in Gwagwalada, Abuja. Other studies indicate a substantial correlation between the performance (sales volume) of SMEs in Gwagwalada, Abuja, and innovations in products, processes, and marketing. The report suggests that SMEs in Gwagwalada-Abuja work to enhance their company procedures or embrace new, creative methods as this would considerably boost their performance. The study's focus is only on Gwagwalada-Abuja, though. This study seeks to close this gap by focusing on the Bida metropolis, a new area of inquiry.

Nasser, Azilah, and Kamisah (2020) investigated the effect of innovation on SME performance in Oman in a similar research. Using a self-administered survey, the research took a quantitative approach to data collecting and analysis. According to the study's findings, innovation has a positive and substantial impact on the success of SMEs in Oman. However, the study failed to use any robust method for data analysis and hypotheses testing. This study intends to fill this gap by employing multiple linear regression for data analysis and hypotheses testing.

In a different research titled Innovation and SME Performance in Nigeria: A Proposed Framework by Abubakar & Hussaina (2020). The study's goal is to put out a methodology for analyzing how innovation affects the performance of SMEs in Nigeria. Performance of SME was the dependent variable, while product and process innovations were the covariates. However, company size, age and type of activity were added as control variables. Finally, both quantile regression and hierarchical regression models are offered as econometric models. However, the study failed to state the sampling technique they adopted for their study. Therefore, this study intends to fill this gap by using a census approach in selecting the sample size and technique.

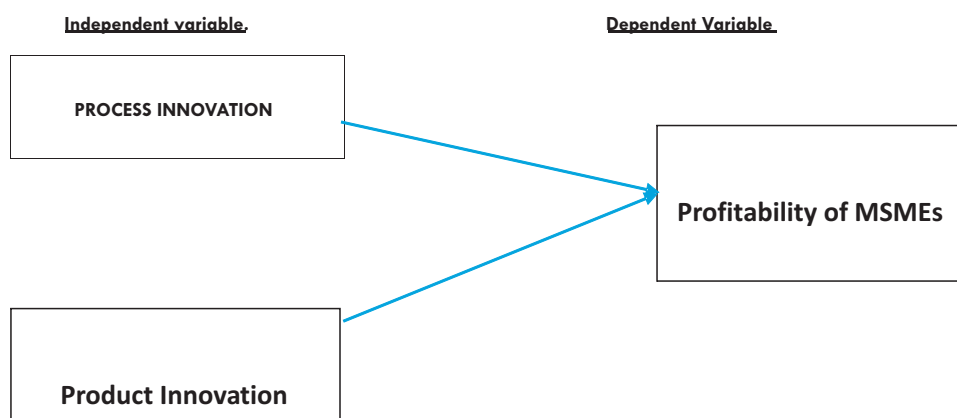
2.4 Theoretical Framework

One of the most common innovation theories is the open innovation theory by Henry

Chesbrough (2003), which is used in this study. According to the principle, businesses should not restrict themselves to internal ideas and marketing strategies but instead take into account external ideas, which may be just as significant. MSMEs encounter a variety of obstacles to innovation, including a lack of innovation tools, processes, and managerial skills. These businesses, however, have a significant capacity to evolve their inventions over time. In particular, open innovation offers MSMEs the opportunity to make extensive use of external innovation resources as well as scientific innovation ideas and management tools (Chesbrough, 2006, as cited in Mohamed, Muhumed and Abdikarim, 2017). This study's application of the open innovation theory is based on the idea that for MSMEs in Bida Local Government to achieve its goal of innovation, it is recommended that they must employ both internal and external marketing channels in addition to internal and external innovation ideas in order to embrace creative tactics and advance their technology.

2.6 Conceptual Model

For the purposes of this study, two types of innovation—product innovation and process innovation—were conceived as independent variables. These are intended to affect the MSMEs' goals of profitability.



Source: Researchers survey

3.1 Methodology

The research used quantitative research design. The study was conducted in Bida, Niger State. The study used primary data. The research population consists of micro, small and medium-sized business owners in Bida. According to SMEDAN report (2023), the total population of registered MSMEs in Bida is fifty-four and the census approach was used to select the MSMEs since the population is small and manageable. The questionnaire was divided into two parts. Section "A" focuses on personal information of respondents, while Section "B" focuses on survey variables based on 5-point Likert scale statements. The independent variables consist of product and process innovations adopted from the work of Sani and Olaniyi (2022). The dependent variable also consists of the profitability of MSMEs taken from the works of Serge, Maria, Mateausen, Silvana, Eveliina and Mintu (2018). Cronbach's alpha was used to determine reliability as shown in Table 1 below:

Table 1: Reliability Test

Variable	Number of Items	Reliability coefficient
Product Innovation (PDI)	4	.889
Process Innovation (PSI)	4	.797
Profitability of MSMEs (PMSMEs)	4	.796

Source: Researchers survey, 2023

The collected data were analyzed using frequency tables and percentage which were presented in tabular form. The questionnaire data were coded and entered into the computer using the Statistical Package for Social Science (SPSS Version 23) for analysis. Means and standard deviations were obtained for each independent and dependent variables. The study also used multiple regression analysis (MRA). The regression model is presented as follows:

$$\text{PSMEs} = \alpha + \beta_1 \text{PSI} + \beta_2 \text{PDI} + \epsilon;$$

Where:

 α : Constant

PSMEs= Profitability of SMEs

PSI: Process Innovation

PDI: Product Innovation

4.0 DATA ANALYSIS AND DISCUSSION OF FINDINGS

A total number of Fifty-four (54) MSMEs in Bida were selected and data gathered by means of a structured questionnaire. Fifty-two copies of questionnaire (52) were properly filled and returned by the respondents.

4.1.1 Normality Test

To ascertain the distribution's normalcy in this research, Skewness and Kurtosis were utilized. According to Hair, Black, Barbn, and Anderson (2010), a dataset must have figures for Kurtosis and Skewness that fall between the ranges of -7 to +7 and -2 to +2 respectively, for it to be considered regularly distributed. Table 2 below demonstrates how the statistics are consistent with the aforementioned assumptions.

Table 2: Normality Test using Kurtosis and Skewness

Variables	Kurtosis	Skewness	Decision
Product Innovation (PDI)	2.006	-1.666	Normal
Process Innovation (PSI)	-1.106	-1.128	Normal
Profitability of MSMEs (PMSMEs)	-1.431	1.177	Normal

Source: Researchers computation using SPSS

4.2 Test of Hypotheses

4.2.1 Test of Hypotheses I

H_{01} : Product Innovation has no any significant impact on the profitability of MSMEs in Bida Metropolis.

Table 3: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.950 ^a	.903	.901	.936	.522

a. Predictors: (Constant), PDI

b. Dependent Variable: PMSMEs

An R-squared value of 0.903 demonstrates that the variable that is independent accounts for 90% of the variance in the dependent profitability of MSMEs. The outcome of the regression in Table 3 above displays a multiple correlation of R-value of 0.950, indicating a good degree of prediction. The 90.1% of the variance in the variable that is independent is attributed to it, according to an adjusted R-square of 0.901 variables.

Table 4: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	407.521	1	407.521	465.349	.000 ^b
	Residual	43.787	50	.876		
	Total	451.308	51			

a. Dependent Variable: PMSMEs

b. Predictors: (Constant), PDI

The model has a statistically significant F value of 465.349 and a value of P of .000, according to table 4 above. We may draw the conclusion that the independent variable, product innovation, predicts changes in the dependent variable, MSMEs' profitability.

Table 5: Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-11.582	1.234		-9.388	.000
	PDI	1.842	.085	.950	21.572	.000

a. Dependent Variable: PMSMEs

According to Table 5, product innovation has a favorable and substantial impact on MSMEs' profitability ($P = .0000.05$). We thus embrace the alternative hypotheses, which claim that product innovation has a substantial impact on the profitability of MSMEs in the Bida metropolitan, and reject the null hypothesis.

4.2.2 Test of Hypotheses II

H_{02} : Process Innovation has no any significant impact on the profitability of MSMEs in Bida Metropolis.

Table 6: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the estimate	Durbin-Watson
1	.909 ^a	.826	.822	1.255	.350

a. Predictors: (Constant), PSI

b. Dependent Variable: PMSMEs

The multiple correlation of R value, which is 0.909 in the regression result in Table 6 above, indicates an excellent degree of prediction. The dependent variable, the profitability of MSMEs, is the dependent variable, and the independent variable, with an R-squared value of 0.826, explains 83% of the disparity in its performance. 82.2% of the variance in the variable that is independent is attributed to it, according to an adjusted R-square of 0.822.

Table 7: ANOVA ^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	372.567	1	372.567	236.580	.000 ^b
	Residual	78.740	50	1.575		
	Total	451.308	51			

a. Dependent Variable: PMSMEs

b. Predictors: (Constant), PSI

Table 7 above shows that the model is statistically significant, with a F value of 236.580 and a P value =.000. We may draw the conclusion that the variable that is independent (process innovation) predicts changes in the dependent variable—the profitability of MSMEs.

Table 8:		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.933	.324		-2.877	.004
	PSI	.852	.013	.967	66.059	.000

a. Dependent Variable: PMSMEs

The profitability of MSMEs is positively and significantly impacted by process innovation, as shown in Table 8 above (P =.0000.05). As a result, the study support the alternative hypothesis—that process innovation significantly affects MSMEs' profitability in the Bida metropolis—and reject the null hypothesis.

4.3 Discussion of Finding

The result from a test of hypotheses indicates that product innovation has a positive and significant effect on the profitability of MSMEs in Bida metropolis. Likewise, result from test of hypotheses II also indicates that process innovation has a positive and significant effect on profitability of MSMEs in Bida metropolis. This is in line with the findings of Nasser, Azilah & Kamisah, 2020; Mohammad, 2022; Zwingina & Opusunju, 2017; Alam & Adeyinka, 2021 and Danh, Huong, Thanh & Lai, 2023. Therefore, the study conclude that innovation has a positive and significant effect on the profitability of MSMEs in Bida metropolis.

5.1 Conclusions and Recommendations

A survey approach was employed in this research. The tool was a structured questionnaire graded on a 5-point Likert scale. The results of the multiple regression analysis were used to examine the survey data. According to the regression results, product innovation significantly and favorably impacts MSMEs' profitability in the Bida metropolitan. The result of Hypothesis II also shows that process innovation has a positive and significant effect on the profitability of MSMEs in the metropolitan city of Bida. Therefore, we conclude that innovation has a

significant impact on MSMEs profitability in Bida local government. The study therefore recommended the adoption of product and process innovation for MSMEs in Niger State because innovation has a positive effect on the profitability of MSMEs. Entrepreneurs and potential entrepreneurs must be open to different innovation strategies. They should be ready to encourage their employees to innovate by empowering them. The government should support the innovation of micro, small and medium-sized enterprises through grants and subsidies. Micro, small and medium-sized enterprises (MSMEs) should be informed about the importance of innovations that are profitable or necessary for the survival of their enterprises. They should be willing to learn from successful innovative entrepreneurs.

5.2 Limitations and Suggestions for Further Studies

This research is limited to product and process innovation. Therefore, this research study has not inculcated all the types of innovations that are available for MSMEs, and has solely focused on a limited number of innovations. Further research could therefore, examine the use of additional types of innovation and analyse their impact on the profitability of MSMEs.

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Descriptives

		Statistic	Std. Error
PDI	Mean	14.37	.213
	95% Confidence Interval for Mean	Lower Bound	13.94
		Upper Bound	14.79
	5% Trimmed Mean	14.49	
	Median	15.00	
	Variance	2.354	
	Std. Deviation	1.534	
	Minimum	10	
	Maximum	17	
	Range	7	
	Interquartile Range	1	
	Skewness	-1.666	.330
	Kurtosis	2.567	.650
PSI	Mean	18.40	.268
	95% Confidence Interval for Mean	Lower Bound	17.87
		Upper Bound	18.94
	5% Trimmed Mean	18.53	
	Median	18.00	
	Variance	3.736	
	Std. Deviation	1.933	
	Minimum	13	
	Maximum	22	
	Range	9	
	Interquartile Range	2	
	Skewness	-1.128	.330
	Kurtosis	2.006	.650
PMSMEs	Mean	14.88	.413
	95% Confidence Interval for Mean	Lower Bound	14.06
		Upper Bound	15.71
	5% Trimmed Mean	15.15	
	Median	16.00	
	Variance	8.849	
	Std. Deviation	2.975	
	Minimum	7	
	Maximum	18	
	Range	11	
	Interquartile Range	4	
	Skewness	-1.431	.330
	Kurtosis	1.177	.650

