



## Effect of Innovation Process on the Performance of Small and Medium Enterprises (SMEs) in Ebonyi State

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### Abstract

The study evaluated the effect of innovation process on the performance of SMEs in Ebonyi State. The specific objectives include: ascertain the effect of value creation on the output and examine the effect of collaboration on the effectiveness. The area of the study was Abakiliki Metropolis. Two hundred and eighty three (283) business owners and employees were selected for the study. Descriptive survey design was used. The primary source of data was administration of questionnaire. Two hundred and fifty three (253) owners and employees returned their questionnaire and accurately filled. Data was analyzed by mean score and standard deviation. The hypotheses were analyzed using Z - test. The findings indicated that Value creation had significant positive effect on the output,  $Z(95, n = 253), 5.658 < 9.430 = p. < 0.05$ . Collaboration had significant positive effect on the effectiveness  $Z(95, n = 253), 6.648 < 9.352 = p. < 0.05$ . The study concluded that Value creation and collaboration had significant positive effect on the output and effectiveness of SMEs in Ebonyi State. The study recommended that the most value for customers, companies should focus on developing products that are innovative, high quality, and of interest to their target market.

**Keywords:** Innovation process, performance, value creation, collaboration, effectiveness.

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### Introduction

In today's corporate climate, where change is the only constant, adopting innovation is more than a choice; it is a strategic requirement. As organizations traverse the intricacies of the digital world, the value of a well-defined innovation process becomes not just visible, but also crucial for keeping ahead of the curve. Innovation is a constant process that reshapes enterprises, moving them towards development, adaptation, and sustainability (Dieffenbacher, 2023). Small



and medium-sized firms (SMEs) have a favourable influence on the country's economic growth and competitiveness owing to their flexibility, capacity to adapt to market changes, and impact on employment and knowledge transfer. One of the benefits of these SMEs is the capacity to continually enhance their operations, processes, and procedures while minimizing risk and barriers. Despite having ready access to innovative techniques, most SMEs operate at a lower level of output and performance. To compete in this new technological and inventive business climate, SMEs must embrace innovation and the use of new technology. Expósito, Fernández-Serrano, and Liñán (2018) discovered that these technologies and innovations boost the performance of SMEs through innovative business practices.

The growth of innovation is reliant on the sort of economic activity produced by the organisation and the interactions it has with its internal and external contexts. They innovate in response to client expectations and market demands. (Fabiana, Edson & Marcela, 2016). The innovation process is intimately tied to improvement and achievement, which assists in the competitive success of enterprises. The application or introduction of a new technology or technique of accomplishing something that supports a corporation in remaining competitive and satisfying the expectations of its consumers is referred to as the innovation process. The innovation process may be utilised to a wide range of procedures in a number of enterprises and sectors (Awati and Pratt, 2023). The innovation process may provide value and cooperation for internal customers, like as workers or the company, as well as value for external customers, such as business partners, end users, or consumers. An innovation process happens when a manufacturing technique or technology is enhanced or upgraded.

Performance refers to an organization's capacity to achieve its objectives and deliver the best potential outcomes. The performance of SMEs is assessed by measuring their value added (VA) as a proportion of the overall VA of firms. Organizational performance refers to how well an organization is performing and how well it completes its daily operations and stated objectives (Indeed, 2022). Innovation is widely regarded as one of the most important sources of long-term competitive advantage in an ever-changing environment, because it leads to product and process improvements, continuous advances that help firms survive, and allows firms to grow faster,



more efficiently, and ultimately more profitably than non-innovators. This requirement is for the investigation of the influence of the innovation process on the performance of SMEs in Ebonyi State. The innovation process is vital to every firm's growth and success. The innovation process phases contain all of the essential operations that organizations must conduct in order to accomplish the desired innovation. It entails transforming ideas and thoughts into reality in order to increase efficiency and effectiveness. As a result, any firm must prioritize innovation. However, just like every other component that contributes to the success of different enterprises, innovation is plagued with perils and problems.

As the world gets more technologically oriented by the day, the requirement of well-defined innovation in every organization that aspires to realize its goals becomes not only clear, but also crucial for remaining ahead of the curve. Most of the time, the desire to launch these innovation processes in small and medium-sized firms could diminish owing to aversion to change, a lack of resources and funds, and restricted access to talent and knowledge among employees. Furthermore, even if there are individuals who can cover these gaps, there will be a dearth of managers with acceptable planning abilities, which can result in poor value growth and collaboration within the business. Innovation is a crucial driver of organizational growth and development. Since a consequence, one of the business's priorities should be to design strategies for coping with its issues, since they may result in low productivity and ineffectiveness among the company's staff and management.

Thus, it is vital to evaluate the influence of the innovation process on the performance of SMEs in Ebonyi State. The main objectives of the study were to evaluate the effect of innovation process on the performance of SMEs in Ebonyi State. The specific objectives of the study were to: Ascertain the effect of value creation on the output of SMEs in Ebonyi State. Examine the effect of collaboration on the effectiveness of SMEs in Ebonyi State. What is the effect of value creation on the output of SMEs in Ebonyi State? What is the effect of collaboration on the effectiveness of SMEs in Ebonyi State? The following statements formed the hypothesis of the study. Value creation has effect on the output of SMEs in Ebonyi State and Collaboration has



effect on the effectiveness of SMEs in Ebonyi State. The study will be of tremendous use for SMEs.

The findings will assist managers recall the requirement of continual innovation if they wish to stay on top of their organizational objectives. The research objectives will also be utilised to advise management on tactics that may be applied in the company to accomplish its goals and ambitions. The article will also act as reference information for future scholars. The study was on the effect of innovation process on the performance of SMEs in Enugu State. The key variables of the study were value creation, collaboration, output and effectiveness. The geographical scope of the study was Ebonyi State. The time scope of the study was 2022-202

## **Conceptual clarification**

### **Innovation Process**

Innovation process is a systematic approach established in accordance with an organization's strategy in order to attain its aim. Process innovation refers to advances in how things are done. It can lead to increased efficiency and cost savings. To attain the societal advantages that innovation may give, the process requires considerable and proper public policy support. Innovation was perceived as a process or a sequence of actions and steps, but the context, such as business culture for innovation and the role of human resources for innovation, were only partially reflected. Today's innovation practice demonstrates that innovation is, by definition, a value-free expression that spans the whole range of activities from discovery to the first practical application of new knowledge. Furthermore, innovation tries to meet receivers' purposes and expectations in unique ways, highlighting that risk and uncertainty are inherent in all phases of innovation processes (Meissner and Kotsemir, 2016).

### **Value creation**

Value creation refers to the process of adding value to something. It is the process of making something that is more value than the inputs. Typically, the valuable thing is characterized as a product or service given by a corporation that answers a consumer's problem (Williams and Hendricks, 2023). Value is vital in the development of a firm as it is one of four key components of a business model: product, site, pricing, and promotion. Without a doubt, value adds to



marketing and promotion as all three (promotion, price, and product) are dependent on knowing value. People are more inclined to adopt a product or service if they feel it is valued. Understanding the core notion of value is vital for every business owner or entrepreneur, as value creation is crucial to a company's success (Williams and Hendricks, 2023).

### **Collaboration**

Collaboration is a sort of contact that is often utilized in for-profit, philanthropic, and governmental organizations to achieve a shared objective, activity, or product (Keyton, 2017). Collaboration is a union; the process of producing or developing something together. Collaboration can take place between two or more persons, strangers or close friends. Collaborative practice is becoming increasingly vital to how we operate, offer services, and make breakthroughs. Collaboration is generally characterized as individuals or organizations working together to address issues and achieve goals that are not readily or efficiently completed by working alone. Companies prefer collaborative connections because the synergies achieved by combining effort and knowledge offer larger rewards than those earned by solo effort. Collaboration is a sort of interaction in which people, teams, or organizational members work together to achieve a single common objective, activity, or production.

Cooperation normally happens in teams or groups of collaborators, while some partnerships encompass hundreds of individuals. Collaboration in business is vital, yet many business owners may not understand it at first. While many business owners focus on sales, marketing, and personnel, which are all crucial, they fail to understand the critical necessity to emphasis internal and external cooperation opportunities (Lorraine, 2022).

### **Performance.**

In the workplace, job performance relates to the stated notion or demands of a role. A good performance is determined by the performer's acquired talents and competencies, generally described as the degree of skill and knowledge. Performance management is a strategy that allows managers to monitor and analyze their workers' work. The purpose of performance management is to promote an atmosphere in which individuals may succeed to the best of their



ability while also aligning with the organization's overall goals (Tardi, Kindness, & Velasquez, 2023).

## **Output**

Output is the result of an economic process that employs inputs to generate a product or service that is offered for purchase or usage in an organization. Outputs are business consequences that may result from the inputs that a firm utilizes and applies. Outputs are generally quantitative events connected to an organization's aims and objectives (Indeed, 2022). Output measures show the consequence of an action. These usually track the volume of labour accomplished, such as the quantity of service supplied, staff recruited, or the number of customers serviced. Employee output is a measure of an employee's or a group of employees' productivity. It is assessed by assessing the complete workforce or employee production within a given time period. Output is a measure of production against efficiency. It comes up commonly in ordinary speech (Down, 2019).

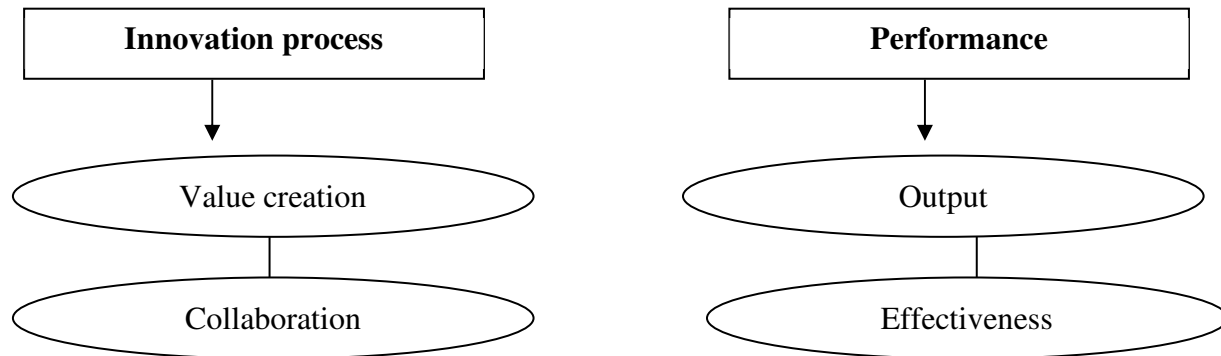
## **Effectiveness**

Effectiveness is the capacity to achieve a desired goal. When something is deemed effective, it indicates it has an intended or expected consequence or generates a strong, vivid impact. Organizational effectiveness pertains to how an organization has attained comprehensive self-awareness, which is due in part to leaders creating well-defined goals for staff and explaining how to efficiently execute those goals. At its most basic level, organizational effectiveness is a notion that assesses how thoroughly and efficiently a corporation fulfills its business objectives. An efficient organization operates like a well-designed, well-oiled machine. Its moving pieces work together flawlessly to produce the outputs the company wants with little waste of money or time (Devron, 2019).



Organizational effectiveness is a notion that organizations use to measure their performance in reaching their targeted results.

### Conceptual framework



### Theoretical Framework

The study was anchored on Rogers' Innovation Diffusion Theory. Everett Rogers presented his Innovation Diffusion Theory (IDT) in 1962, which provides a framework for understanding innovation adoption and the elements that impact an individual's perceptions about an innovation. Rogers' theory is broad in scope, making it adaptable to a range of circumstances. However, it is challenging to employ as a process model while preparing for organizational change owing to acceptance of an invention (Straub, 2009). Rogers' diffusion theory is made up of four major components: the innovation, the communication channels used to broadcast information about the innovation, the social system that surrounds the innovation's adopters/non-adopters, and the time it takes for individuals to progress through the adoption process. Rogers' view, the innovation choice or process that leads to adoption or rejection of the invention is considered a sub-process of dissemination. Rogers offers five activities potential adopters can do in this process. The first stage is to obtain an understanding of the invention and its purpose. The second phase is persuasion, in which the potential adopter creates an opinion about the proposal. The third phase entails selecting whether to accept or reject the invention. The fourth step happens when the adopter executes the invention. Finally, the adopter enters the confirmation stage, when they seek reinforcement for their decision to accept the innovation.



They may continue to embrace the innovation as they recognize its advantages, or they may change their opinion and reject it (Rogers, 2003).

### **Value creation on the output**

Yenny (2015) Developed the notion of value, value generation, and customer value. The goal of this study was to explore the influence of value creation on organizational performance. The effect of adaptive capacity on organizational performance, the effect of value creation on the transformation of higher education, the effect of higher education performance on the transformation of higher education, and the indirect effect of value creation. on the transformation of higher education through higher education achievement, as well as the indirect effect of adaptive ability on this transition. The method utilized is quantitative, employing a structural equation modeling (SEM) approach. Primary data was obtained via a survey of 168 private university instructors in Serang. Data were analyzed using Smart PLS 3.3. The results of the analysis show that the seven hypotheses analyzed are all significant; there is a direct effect of value creation on organizational performance; there is a direct effect of adaptive capacity on organizational performance; there is an effect of value creation on the transformation of higher education both directly and through higher education performance; there is an influence of adaptive capacity on the transformation of tertiary institutions both directly

Emmanuel and Willie (2020) investigated Small and Medium-Sized Enterprises (SMEs) and Economic Growth in Nigeria. This study analyzed the influence of Small and Medium Scale Enterprises (SMEs) on economic growth in Nigeria, utilizing data from 1986–2018. The acquired data was analyzed using the Vector Auto regression (VAR) approach. The calculation's findings suggested that SMEs' production growth rate has a considerable positive influence on GDP growth rate (a proxy for economic growth). Furthermore, SMEs account for 61% of GDP growth. Thus, the poll concluded that SMEs are driving Nigeria's economic growth. The report proposes that the Central Bank of Nigeria guarantee that SMEs have improved access to funding at a lower cost in order to boost their growth. Adam and Alarifi, (2021) Innovation techniques for the survival of small and medium-sized companies (SMEs) during COVID-19: the necessity of external help. Global pandemic crises, such as the coronavirus (COVID-19), often expose





small and medium-sized companies (SMEs) to a range of obstacles, sometimes threatening their lives. This study tries to create a theoretical model to give insights into the link between creative practices and SMEs' performance and survival, highlighting the auxiliary role of external aid in such a relationship. An online questionnaire was utilized to collect data from 259 randomly selected SME managers in Saudi Arabia, and the findings were evaluated using the SmartPLS3 software. The structural equation modeling findings demonstrated that the inventive tactics utilized by SMEs to handle the repercussions of COVID-19 had a beneficial influence on company performance and survival. The PLS-SEM bootstrap results suggested that external aid helps to improve the favourable impact of SMEs' innovative activities on company survival rather than performance. The study has numerous key practical consequences for SME managers, governments, and policymakers, as previously mentioned.

Crous and Van Wyk (2021), 'Balancing quantitative and qualitative value-creation reporting', South Africa. In recent years, there has been a rising need for a balanced disclosure of quantitative and qualitative value creation inside an organization and for its stakeholders. As a result, this study focuses on the disclosure of 97 firms listed on the Johannesburg Stock Exchange over a five-year period (2015-2019). A three-phased content analysis was undertaken. The researchers observed that value-creation disclosures are largely centred with quantitative value creation, with an emphasis on value ideas such as investor returns, cash flow, staffing expansions, and employee benefits. Some firms have built integrated reporting methodologies that now incorporate a reference to value generation by balancing multiple forms of capital. However, their reports continue to lack explicit assertions or definitions of what value creation comprises, as well as qualitative value-creation ideas. The authors claim that uneven reporting directed on quantitative value ideas remains.

Gajere (2023) Strategic orientation and performance of Nigerian SMEs: The moderating influence of competitive intensity. Small and medium-sized companies (SMEs) are a key framework for fostering economic growth and wealth creation. Despite their importance as instruments of economic growth and development, the performance of Nigerian SMEs has decreased over time, harming the country's development. This study intended to evaluate if



strategic orientation and its components of market, learning, and entrepreneurial orientations increase the performance of SMEs. In addition, the study evaluated whether competitive intensity moderates these correlations. The study employed a cross-sectional research approach with a sample of 213 SMEs in Nigeria. PLS-SEM was utilized for data analysis, and the measurement equipment' validity was examined and certified as sufficient. According to the study, only market orientation contributes to the success of SMEs in Nigeria, whereas learning and entrepreneurial aspects do not predict performance. Competitive intensity also failed to lessen the link between strategic orientation and SMEs' performance in Nigeria. The theoretical and practical ramifications of the study were then examined.

### **Collaboration on the effectiveness**

Baba and Thiong'o (2019): Vision and Performance of Small and Medium Enterprises (SMEs) in Nigeria. The goal of this research was to investigate the relationship between vision and performance of SMEs in Nigeria. The study followed a positivist research ethic, focusing on objectively quantifying facts through statistical analysis of data collected from the study variables. To assess the relationship between the variables, descriptive and inferential statistics, including correlations and regressions, were used. Prior to analyzing using an ordinary least squares regression model, the study performed diagnostic tests such as the normality test, multicollinearity test, linearity test, and homogeneity test. The survey results showed that, on average, the majority of respondents agreed with the assertions regarding the vision of entrepreneurship, with a mean score of 3.94. The respondents' responses were quite consistent, with a standard deviation of 1.16.

Issau, Acquah, Gnankob, and Hamidu (2020) investigated the innovation orientation and performance of small and medium-sized enterprises (SMEs) in Ghana: evidence from the manufacturing sector. The purpose of this article is to investigate the impact of innovation-oriented variables on the performance of manufacturing small- and medium-sized businesses (SMEs) in Ghana. This experiment used probabilistic sampling methods, namely the simple random approach. A total response rate of around 81% was obtained from a 346-person sample. Furthermore, the PLS-SEM technique was used to find correlations between the research



variables. According to the research, market innovation has a significant impact on the success of SMEs. In contrast, no significant positive relationship was found between process innovation and SMEs' performance, as well as product innovation and SMEs' performance.

Tahir, Ibrahim, and Babawulle (2021), evaluating Small and Medium-Sized Enterprises (SMEs) Performance and Economic Growth Nexus in Nigeria: ARDL - Bound Testing Evidence. Empirical study on the link between the performance and impact of SMEs' activities on economic growth has shown inconsistent conclusions. Nonetheless, this study aims to examine the link between SME performance and economic growth in Nigeria from 1980 to 2017. Annual series data were collected, and the ARDL approach for co-integration was used to assess the issue. The results showed both positive and negative linkages; nonetheless, the variables were co-integrated, fitting the criterion for computing the long-term relationship between the variables.

Eneh and Ugwu (2022), The Effect of Sustained Collaboration on Organizational Productivity of Commuter Firms in Enugu State. The study investigated the impact of continuous collaboration on the organizational efficiency of commuter companies in Enugu State. The specific objectives are to investigate the impact of collaboration on commuter business efficiency in Enugu State, to determine the effect of communication on commuter firm production in Enugu State, and to investigate the impact of Mutual Trust and Respect on commuter firm market share in Enugu State. The research focused on commuter firms in Enugu State. The study used a survey method. The major sources are questionnaires distributed to the management and employees of industrial organizations. A sample of 242 persons was drawn from a population of 645. The sample size of 242 was found using the Freund and William's approach for calculating the appropriate sample size. Out of the sample, 240 people returned the questionnaire and completed it correctly. That resulted in a 99 percent response rate. The data was presented and evaluated using the Sprint Likert Scale, with a mean score (3.0 and above agreeing and less than 3.0 disagreeing) and standard deviation. The hypotheses were tested using the Z-statistic tool and the SPSS version. The findings indicated that there was a positive significant effect of cooperation on efficiency of commuter firms in Enugu State,  $Z(95, n = 242) = 12.867, p > 0.05$ ; there is a positive significant



effect of communication on output of commuter firms in Enugu State,  $Z(95, n = 242) = 15.875$ ,  $p > 0.05$ ; and there is a positive significant effect of Mutual Trust and Respect on market share of commuter firms in Enugu State,  $Z(95, n = 242) = 12.805$ ,  $p > 0.05$ .

Agbo, Eze, & Mbah (2023) Sustainable Business Practices and the Performance of Aluminium Manufacturing Firms in Enugu State. The research looked at the impact of sustainable business practices on the performance of aluminium manufacturing companies in Enugu State. The specific goals were to: investigate the impact of high-quality goods and services on profitability; and assess the effect of innovation on sales growth. The research population consisted of two hundred and fifteen (215) directors, managers, and senior personnel from chosen aluminium manufacturing businesses in Enugu State. The survey approach was used in conjunction with stratified random sampling in the study. The primary source was the distribution of questionnaires. Due to the restricted number of participants, the entire population was used. 182 persons completed the questionnaire properly. The data was presented and evaluated using the Sprint Likert Scale, with a mean score (3.0 and above agreeing and less than 3.0 disagreeing) and standard deviation. The hypotheses were tested using the Z-test statistical tool. The results showed that High Quality products had a substantial favourable impact on the profitability of aluminium manufacturing businesses in Enugu State ( $Z(95, n = 182) = 6.041 < 9.043$ ,  $p < 0.05$ ). Innovation significantly impacted sales growth in Enugu State's aluminium manufacturing businesses ( $Z(95, n = 182) = 6.560 < 7.227$ ,  $p < 0.05$ ).

### **Methodology**

The investigation was conducted in Abakiliki Metropolis, Ebonyi State. The study included 283 business owners and staff. The study used a descriptive survey design approach. The majority of the data came from the administration of questionnaires. Two hundred and fifty-three (253) owners and employees completed and submitted their forms accurately. That yielded an 89 percent response rate. The validity of the instrument was tested using content analysis, and the results were good. The Pearson correlation coefficient ( $r$ ) was used to assess dependability. It produced a dependability coefficient of 0.85, which was also good. The data was presented and evaluated using the Sprint Likert Scale, with a mean score (3.0 and above agreeing and less than 3.0 disagreeing) and standard deviation. The hypotheses were tested using the Z-test statistic tool



### Data Presentation

#### The effect of value creation on the output of SMEs in Ebonyi State

**Table 1: Responses on the effect of value creation on the output of SMEs in Ebonyi State**

		5	4	3	2	1	$\Sigma$ FX	-	SD	Decisio
		SA	A	N	D	SD		X		n
1	Enhancing customers satisfaction promotes outcomes of the SMEs	450	80	258	74	20	882	3.73	1.385	Agree
		90	20	86	37	20	253			
		35.6	7.9	34.	14.	7.9	100%			
				0	6					
2	The improvement of product developments enhances better service	690	80	117	70	21	978	3.92	1.343	Agree
		138	20	39	35	21	253			
		54.5	7.9	15.		8.3	100%			
				4	13.					
					8					
3	Focusing on reducing costs attracts customers		80	51	50	29	750	4.25	1.132	Agree
		540	20	17	25	29	253			
			7.9	28.	9.9	11.5	100%			
		108		1						
		42.7								
4	Growing of market share enhances productivity	605	212	99	46	23	985	4.15	1.111	Agree
		121	53	33	23	23	253			
		47.8	20.	13.	9.1	9.1	100%			
			9	0						
5	Improving employee relations promotes security	750		66	52	18	1034		1.059	Agree
		150	148		26	18	253	3.70		
		59.3	37	22	10.	7.1	100%			
			14.		3					
			6	8.7						
<b>Total Grand mean and standard deviation</b>								<b>3.95</b>	<b>1.206</b>	

*Source: Field Survey, 2024*

Table 1, 110 respondents out of 253 representing 43.5 agreed that Enhancing customers satisfaction promotes outcomes of the SMEs, while 86 respondents were neutral representing 34.0 percent, 37 respondents disagree representing 14.6 percent with mean score 3.73 and standard deviation of 1.385. The improvement of product developments enhances better service 158 respondents representing 62.4 percent agreed, while 39 respondents were neutral representing 15.4 percent, 35 respondents disagree representing 13.8 percent with mean score of 3.92 and standard deviation of 1.343. Focusing on reducing costs attracts customers 128 respondents representing 50.6 percent agreed, while 17 respondents were neutral representing



28.1 percent, 25 respondents disagree representing 9.9 percent with mean score of 4.25 and standard deviation of 1.132. Growing of market share enhances productivity 174 respondents representing 68.7 percent agreed, while 33 respondents were neutral representing 13.0 percent, 23 respondents disagree representing 9.1 percent with mean score of 4.15 and 1.111. Improving employee relations promotes security 187 respondents representing 73.9 percent agreed, while 22 respondents were neutral representing 48.7percent, 26 respondents disagree representing 10.3 percent with a mean score of 3.70 and standard deviation of 1.059.

**The effect of collaboration on the effectiveness of SMEs in Ebonyi State**

**Table 2: Responses on the effect of collaboration on the effectiveness of SMEs in Ebonyi State**

		5	4	3	2	1	∑FX	-	SD	Decision
		SA	A	N	D	SD		X		
1	Better problem-solving together facilities building of trust i the organization	525	256	54	86	23	944	3.49	1.317	Agree
		105	64	18	43	23	253			
		41.5	25.	7.1	17.	9.1	100%			
			3		0					
2	Collaboration improves how employees work together and prevent conflicts	580	296	57	30	29	992	3.87	1.411	Agree
		116	74	19	15	29	253			
		45.8	29.	7.5		11.5	100%			
			2		5.9					
3	collaboration increases productivity and improves engagement		276	54	12	17	495	3.60	1.409	Agree
		725	69	18	6	17	253			
			27.	7.1	2.4	6.7	100%			
		143	3							
		56.5								
4	There is employee retention through working together and demonstration of understanding	620	344	39	36	12	1051	3.86	1.336	Agree
		124	86	13	18	12	253			
		49.0	34.	5.1	7.1	4.7	100%			
			0							
5	The expanding of skills and learning increases emotional management	415		39	86	20	936		1.315	Agree
		83	376		43	20	253	4.09		
		32.8	94	13	17.	7.9	100%			
			37.		0					
			2	5.1						
<b>Total Grand mean and standard deviation</b>								<b>3.78</b>	<b>1.3576</b>	
								<b>2</b>		

Source: Field Survey, 2024



In table 2, 169 respondents out of 253 representing 66.4% agreed that Better problem-solving together facilitates building of trust in the organization, while 64 respondents were neutral representing 7.1 percent, 43 respondents disagree representing 17.0 percent with mean score 3.49 and standard deviation of 1.317. Collaboration improves how employees work together and prevent conflicts 190 respondents representing 75.0 percent agreed, while 19 respondents were neutral representing 7.5 percent, 15 respondents disagree representing 5.9 percent with mean score of 3.87 and standard deviation of 1.411 collaboration increases productivity and improves engagement 212 respondents representing 83.8 percent agreed, while 18 respondents were neutral representing 7.1 percent, 6 respondents disagree representing 2.4 percent with mean score of 3.60 and standard deviation of 1.409. There is employee retention through working together and demonstration of understanding 210 respondents representing 83.0 percent agreed, while 13 respondents were neutral representing 5.1 percent, 18 respondents disagree representing 7.1 percent with mean score of 3.86 and 1.336. The expanding of skills and learning increases emotional management 117 respondents representing 70.0 percent agreed, while 13 respondents were neutral representing 5.1 percent, 43 respondents disagree representing 17.0 percent with a mean score of 4.09 and standard deviation of 1.315.



## 4.2 Test of Hypotheses

### 4.2.1 Value creation has effect on the output of SMEs in Ebonyi State

**Table 3: Z-test Kolmogorov on value creation has effect on the output of SMEs in Ebonyi State**

		<b>One-Sample Kolmogorov-Smirnov Test</b>				
		Enhancing customers satisfaction promotes outcomes of the SMEs	The improvement of product development enhances better service	Focusing on reducing costs attracts customers	Growing of market share enhances productivity	Improving employee relations promotes security
N		253	253	253	253	253
Uniform Parameters <sub>a,b</sub>	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.356	.545	.427	.478	.593
	Positive	.079	.083	.115	.091	.071
	Negative	-.356	-.545	-.427	-.478	-.593
Kolmogorov-Smirnov Z		5.658	8.676	6.790	7.607	9.430
Asymp. Sig. (2-tailed)		.000	.000	.000	.000	.000

a. Test distribution is Uniform.

b. Calculated from data.

### Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e.  $Z_{cal} > Z_{critical}$ ), reject the null hypothesis and accept the alternative hypothesis accordingly.

### Result

With Kolmogorov-Smirnon Z – value of  $5.658 < 9.430$  and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms the





assertion of the most of the respondents that **value creation had significant positive effect on the output of SMEs in Ebonyi State**

**Decision**

Furthermore, comparing the calculated Z- value of  $5.658 < 9.430$  against the critical Z- value of .000 (2-tailed test at 97percent level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that **value creation had significant positive effect on the output of SMEs in Ebonyi State**

**Collaboration has effect on the effectiveness of SMEs in Ebonyi State**

**Table 4: Z-test Kolmogorov on collaboration has effect on the effectiveness of SMEs in Ebonyi State**

**One-Sample Kolmogorov-Smirnov Test**

	Better problem-solving together facilities building of trust i the organization	Collaborat ion improves how employees work together and prevent conflicts	collaborati on increases productivi ty and improves engageme nt	There is employee retention through working together and demonstration of understanding	The expanding of skills and learning increases emotional management	
N	253	253	253	253	253	
Uniform Minimum Parameters <sup>a,b</sup>	1	1	1	1	1	
	5	5	5	5	5	
Most Extreme Differences	Absolute Positive	.418	.501	.588	.580	.450
	Negative	.091	.115	.067	.047	.079
Kolmogorov-Smirnov Z	-.418	-.501	-.588	-.580	-.450	
Asymp. Sig. (2-tailed)	6.648	7.969	9.352	9.226	7.151	
	.000	.000	.000	.000	.000	

a. Test distribution is Uniform.

b. Calculated from data.



### Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e.  $Z_{cal} > Z_{critical}$ ), reject the null hypothesis and accept the alternative hypothesis accordingly.

### Result

With Kolmogorov-Smirnon Z – value of  $6.648 < 9.352$  and on Asymp. Significance of 0.000, the responses from the respondents as display in the table is normally distributed. This affirms the assertion of the most of the respondents that collaboration had significant positive effect on the effectiveness of SMEs in **Ebonyi State**

### Decision

Furthermore, comparing the calculated Z- value of  $6.648 < 9.352$  against the critical Z- value of .000 (2-tailed test at 97percent level of confidence) the null hypothesis were rejected. Thus the alternative hypothesis was accepted which states that **collaboration had significant positive effect on the effectiveness of SMEs in Ebonyi State**

### Discussion of findings

#### 4.3.1 Value creation had significant positive effect on the output of SMEs

Hypothesis one found that value creation had a significant positive impact on SMEs output in Ebonyi State, with a computed Z-value of  $5.658 < 9.430$  compared to the required Z-value of .000. To support the conclusion, Yenny (2015) assessed the value development concept, value generation, and customer value. The purpose of this study was to investigate the impact of value creation on organizational performance. The results of the analysis show that the seven hypotheses analyzed are all significant; there is a direct effect of value creation on organizational performance; there is a direct effect of adaptive capacity on organizational performance; there is an effect of value creation on the transformation of higher education both directly and through higher education performance; there is an influence of adaptive capacity on the transformation of tertiary institutions both directly

#### 4.3.2 Collaboration had significant positive effect on the effectiveness of SMEs

This hypothesis suggests that cooperation has a significant positive impact on the effectiveness of SMEs in Ebonyi State, with an estimated Z-value of  $6.648 < 9.352$  compared to the necessary



Z-value of.000. In support of the findings, Agbo, Eze, and Mbah (2023) evaluated the impact of sustainable business practices on the performance of aluminium manufacturing firms in Enugu State. The research looked at the impact of sustainable business practices on the performance of aluminium manufacturing companies in Enugu State. The results showed that High Quality products had a substantial beneficial impact on the profitability of aluminium manufacturing businesses in Enugu State ( $Z(95, n = 182) = 6.041 < 9.043, p < .05$ ). Innovation significantly impacted sales growth in Enugu State's aluminium manufacturing businesses ( $Z(95, n = 182) = 6.560 < 7.227, p < 0.05$ ).

### Summary of findings

The following findings were made by the study.

- i. Value creation had significant positive effect on the output of SMEs in Ebonyi State  $Z(95, n = 253), 5.658 < 9.430 = p. < 0.05$ .
- ii. Collaboration had significant positive effect on the effectiveness of SMEs in Ebonyi State  $Z(95, n = 253), 6.648 < 9.352 = p. < 0.05$ .

### Conclusion

Value creation and cooperation have a significant positive impact on the productivity and effectiveness of SMEs in Ebonyi State. As businesses traverse the complexities of the digital world, the importance of a well-defined innovation process becomes not just evident, but also critical for staying ahead of the curve. Despite having easy access to new procedures, most SMEs operate at a lower level of production and performance. To succeed in this new technical and innovative business environment, SMEs must embrace innovation and the use of new technologies.

### Recommendations

The following recommendations were made by the study.

- i. In order to create the most value for customers, companies should focus on developing products that are innovative, high quality, and of interest to their target market as Value creation identifies the intersection between the overlapping interests of customers, stakeholders, and the organization itself.
- ii. The SMEs should endeavour to improve the way the team works together and problem solves through Collaboration. This will lead to more innovation, efficient processes. Promotes a problem-solving approach.



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S/No	QUESTIONNAIRE ITEMS	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<b>I</b>	<b>Effect of value creation on the output of SMEs in Ebonyi State</b>					
1.	Enhancing customers satisfaction promotes outcomes of the SMEs					
2.	The improvement of product developments enhances better service					
3.	Focusing on reducing costs attracts customers					
4.	Growing of market share enhances productivity					
5.	Improving employee relations promotes security					
<b>II.</b>	<b>Effect of collaboration on the effectiveness of SMEs in Ebonyi State</b>					
6.	Better problem-solving together facilitates building of trust in the organization					
7.	Collaboration improves how employees work together and prevent conflicts					
8.	collaboration increases productivity and improves engagement					
9.	There is employee retention through working together and demonstration of understanding					
10.	The expanding of skills and learning increases emotional management					