

The relationship between creative thinking and product diversification among micro, small and medium enterprises (MSMEs) in Anambra state

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Abstract

This study examines the relationship that exists between creative thinking and product diversification among MSME in Anambra State. It employs a quantitative approach, utilizing primary data collected through a structured questionnaire administered to MSME owners and managers in Anambra State and interviews conducted. 331 management teams were purposively selected from registered MSMEs in the Anambra State. Data were gathered using a structured questionnaire, and the respondents' bio data were presented through simple frequency and percentage tables. Hypotheses were tested employing simple regression analysis, utilizing the Statistical Package for Social Sciences (SPSS version 27). The findings reveal that creative thinking has a positive significant relationship with product diversification. Based on the findings, the study recommended that providing incentives for businesses that implement creative strategies in their product diversification efforts could further encourage the adoption of creative thinking as a core component of their business practices, thus boosting their growth and competitiveness.

Keywords: Creative Thinking; Product Diversification; Msmes; Anambra State

1. Introduction

Product diversification has become a critical growth and survival strategy for Micro, Small, and Medium Enterprises (MSMEs) around the world. As global markets evolve due to technological changes, shifting consumer preferences, and increasing competition, MSMEs have adopted product diversification to spread business risks, respond to dynamic demand patterns, and achieve sustained profitability (Organisation for Economic Co-operation and Development, OECD, 2021). Unlike large firms that may absorb shocks more easily, MSMEs often operate on narrow margins, and as such, diversification into new products or markets provides a cushion against revenue loss from any single product line (World Bank, 2020). Diversification also allows MSMEs to utilize idle resources more effectively and explore niche markets, making it a core tool for business development in a rapidly changing economic environment (International Trade Centre, 2021).

Globally, MSMEs that have successfully diversified often attribute their growth to innovation and creativity. In Southeast Asia, for instance, many small enterprises have diversified into digital services and customized consumer goods, allowing them to scale and attract global customers (World Bank, 2020). Similarly, in Latin America, creative diversification into health products and sustainable packaging has allowed MSMEs to remain relevant in competitive sectors. These successes emphasize the link between creative thinking and product diversification, where the capacity to think innovatively enables businesses to conceive, design, and deliver new products that align with emerging consumer demands (United Nations Industrial Development Organization, UNIDO, 2022).

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In Africa, MSMEs contribute over 60 percent of employment and more than 50 percent of gross domestic product in many countries, yet they often face a volatile business environment marked by infrastructure deficits, inconsistent policies, and access-to-finance constraints (African Development Bank, AfDB 2021). Creative thinking has emerged as a critical solution to these challenges, especially in terms of product innovation and market adaptation. For instance, smallholder farmers in Kenya and Uganda have moved into agro-processing and organic farming to meet the increasing demand for healthier food options, driven by creative marketing and rebranding strategies (United Nations Conference on Trade and Development, UNCTAD, 2020). In Rwanda, entrepreneurs in the tourism sector diversified into digital content creation and local craft promotion during the COVID-19 pandemic, turning crises into opportunities through creative strategies (International Labour Organization, ILO, 2021).

Creative thinking, defined as the generation of novel and useful ideas, is central to successful product diversification. It empowers entrepreneurs to identify unmet market needs, reimagine product design, and develop innovative processes (Runco and Acar, 2012). In MSME settings, where resources are often limited, creativity enables the use of local materials, frugal innovation, and flexible product offerings to gain a competitive edge (Hassi and Cervai, 2019). Creative thinking does not only drive product innovation but also supports branding, packaging, and service delivery enhancements. According to the United Nations Educational, Scientific and Cultural Organization (2021), fostering creativity in entrepreneurship leads to increased employment, improved economic resilience, and greater inclusion in global value chains. Therefore, creative thinking is not just desirable—it is a necessity for MSMEs attempting to diversify in competitive markets.

In Nigeria, and particularly in Anambra State, the role of MSMEs in economic development is significant. The National Bureau of Statistics (2022) notes that Anambra has one of the highest concentrations of MSMEs in the country, particularly in cities like Onitsha, Nnewi, and Awka. These MSMEs operate in diverse sectors such as manufacturing, automobile parts production, fashion design, agriculture, and digital services. Many entrepreneurs in these regions have relied on creative thinking to diversify their product lines. In Nnewi, for example, small-scale industrialists have used reverse engineering and innovation to develop a wide array of automotive parts, enabling them to reduce dependency on imports and meet growing regional demands (NBS, 2022). In the agro-processing sector, entrepreneurs in Awka and Ihiala have diversified cassava and rice into packaged food products, snacks, and beverages, enhancing value and shelf life (Small and Medium Enterprises Development Agency of Nigeria, 2021).

However, despite these pockets of success, the integration of creative thinking into the broader MSME landscape in Anambra is limited. Many businesses struggle to institutionalize innovation due to a lack of structured support, poor access to financing, and limited exposure to global trends (World Bank, 2021). Training in creative skills, design thinking, and product development is minimal, especially in rural areas, which limits the capacity of MSMEs to create differentiated products. Moreover, infrastructural challenges such as unstable electricity supply, inadequate road networks, and high production costs further restrict creative experimentation and scalability (AfDB, 2021).

The Anambra State government has attempted to support MSMEs through initiatives such as the Anambra Small Business Agency (ASBA), which provides funding and entrepreneurial training. Collaborations with institutions such as Nnamdi Azikiwe University and private development partners have also aimed to increase skill acquisition and innovation capacity (Anambra State Government, 2021). Nonetheless, the overall impact has been limited. Many entrepreneurs report difficulty in accessing funds due to bureaucratic bottlenecks and lack of transparency in the loan disbursement process (SMEDAN, 2021). Furthermore, the state lacks innovation hubs or incubators that could foster collaboration, mentorship, and creativity among young entrepreneurs. The absence of formal structures that integrate creativity into MSME development strategies has allowed systemic inefficiencies to persist.

The persistence of these challenges can be attributed to several interlinked issues. Firstly, policy inconsistency and a lack of political will have made many interventions unsustainable. Secondly, the informal nature of many MSMEs in Anambra prevents them from accessing formal support systems, including government loans and capacity-building programs (UNIDO, 2022). Lastly, the absence of strong linkages between research institutions, private sector actors, and government bodies has hindered knowledge transfer and slowed the uptake of creative solutions (World Bank, 2020). As a result, many MSMEs in Anambra continue to operate at subsistence levels, unable to compete effectively or scale their operations through product diversification. Thus, this study examines the relationship between creative thinking and product diversification among MSMEs in Anambra State.

2. Literature review

2.1. Conceptual Issues

2.1.1. Creative Thinking

Creative thinking is an entrepreneurial foundation that fosters the ability to visualize creative solutions, find opportunities, and stay strong in continuously changing market conditions (Nwagbala 2023). In MSME environment, creative thinkers can better cope with challenges, design innovative products or services, and stand out in competitive markets (Bernat 2023).

2.1.2. Product Diversification

Product diversification entails the strategic broadening of a firm's offerings by introducing new products or services into either familiar or entirely new markets (Adebisi, 2021). It typically takes two main forms: related diversification, which involves expanding into areas that complement the company's existing operations, and unrelated diversification, which involves entering markets that differ significantly from the firm's core business (Kumar, 2021). For MSMEs, this approach serves as a means to expand customer base, minimize reliance on a single product line, and enhance their ability to withstand changes in market conditions (Idemobi, 2019).

2.2. Theoretical Framework

2.2.1. Opportunity-Based Theory

Peter Drucker's Opportunity-Based Theory (1985) asserts that entrepreneurship is simply the discovery, assessment, and exploitation of opportunities to generate value. The theory highlights the proactive role of entrepreneurs who go out to find opportunities instead of responding passively to market demands. One of the assumptions of the theory is that successful businesspeople are endowed with the capacity to see opportunities for possibilities in the market and utilize them through innovation and mobilization of resources. Such entrepreneurs are most likely to propel product diversification, which allows their organizations to expand into new markets and reduce non-product dependence (Drucker, 1985). One of the criticisms of the theory is that it relies too heavily on opportunity recognition and fails to account for external variables, including market constraints or regulatory issues, which are able to limit an entrepreneur's capacity to take advantage of recognized opportunities (Shane and Venkataraman, 2000). For MSMEs in Anambra State, the application of Opportunity-Based Theory is significant as entrepreneurs with creative minds can diversify product lines to improve competitiveness and sustainability in the wake of market changes and economic uncertainty. Opportunity recognition advanced by the theory aligns with the need for MSMEs in Anambra to innovate and deepen product lines in enhancing resilience and growth.

2.3. Review of Empirical Literature

The research work conducted by Nurcholidah et al. (2024) explores creativity and information technology and how these assists in diversification of the product and also how they influence MSMEs' profitability. The study, employing a literature review with a qualitative approach, analyzed data sourced from Google Scholar published between 2011 and 2024. It points out that creativity makes MSMEs develop innovative goods that make them stand out in the market while information technology supplies them with essential tools and platforms for enhanced designing, producing, and marketing.

Okoli et al. (2024), in their study, explored the influence of innovation practices on the performance of SMEs in Anambra State, Nigeria. The research, driven by the observation of a lack of innovation practices among SMEs, adopted a cross-sectional research design. It focused on 15 SMEs across various sectors, with a sample size of 300 drawn from a population of 1,860 management and workers. The study utilized a validated and reliable questionnaire to collect data, which was analyzed using both descriptive and inferential statistical techniques. Hypotheses were tested at a 5% level of significance. The results demonstrated a strong association between innovation practices and SME performance. In particular, product innovation was significantly associated with enhanced customer satisfaction, process innovation positively impacted customer retention, technological innovation had a notable effect on competitive advantage, and marketing innovation strongly influenced brand awareness. The study concluded that innovation practices are essential drivers of improved performance in small and medium-sized enterprises.

Nnabugwu and Ibekwe (2023) explored the impact of entrepreneurial skillsets on the performance of SMEs in Anambra State, Nigeria. The study aimed to assess how entrepreneurial mindset, leadership, and values influence financial,

marketing, and environmental performance. A review of relevant literature was conducted, and the research employed a descriptive survey design. Data were collected using a structured questionnaire with five Likert scale responses. The study population consisted of 2,093 registered SMEs in Anambra State, with a sample size of 408 determined using the statistical formula by Borg and Gall. Research questions were analyzed using simple percentage analysis, while hypotheses were tested with Linear Regression Analysis (MRA). The findings revealed that entrepreneurial mindset positively impacted financial performance, leadership styles significantly influenced sales performance, and entrepreneurial values played a significant role in marketing performance. The study concluded that entrepreneurial skillsets significantly enhance the performance of SMEs in Anambra State, Nigeria.

Agbionu et al. (2023) examined the relationship between entrepreneurship behavior and the performance of SMEs in Anambra State, Nigeria. The study was grounded in the Resource-Based View Theory, which emphasizes the strategic resources that contribute to business success. A sample of 189 skilled workers from selected SMEs in Anambra State was surveyed, using a valid and reliable questionnaire for primary data collection. The results revealed that key entrepreneurship behaviors, such as innovativeness, competitiveness, and initiative, significantly influenced various aspects of SME performance. Specifically, innovativeness was found to significantly impact employee satisfaction, competitiveness positively influenced customer satisfaction, and initiative contributed to job satisfaction.

Yaya et al. (2022) examine innovation-led diversification strategies that ensure the sustenance of Village-Owned Enterprises (VOEs) in rural Java Island, Indonesia, during the COVID-19 economic crisis. VOEs are locally owned firms in emerging economies that were severely affected by the pandemic. The study, based on case analyses of 13 VOEs, investigates how innovation-driven diversification can enhance the resilience of these enterprises during economic downturns. The findings reveal that unrelated diversification—particularly into the tertiary (service) sector—emerged as a key resilience strategy. This type of diversification proved more effective in ensuring the survival of VOEs than related diversification strategies or those focused on the primary (agriculture, fisheries, mining) or secondary (manufacturing, construction) sectors.

Enobong et al. (2022) investigated how innovation influences the effectiveness of diversification strategies in promoting the sustainability of hospitality firms in Nigeria. Employing a quantitative research design, the study gathered data through a structured questionnaire administered to 104 participants drawn from three four-star hotels. The constructs used in the instrument were validated through Confirmatory Factor Analysis (CFA), while Multiple Regression Analysis (MRA) was employed to evaluate the hypotheses. The results demonstrated that both concentric and conglomerate diversification strategies significantly enhanced the sustainability of hospitality firms. Furthermore, innovation was shown to positively moderate the link between these diversification strategies and firm sustainability.

Sriyono and Kudus (2021) conducted a study to explore the role of creativity and innovation in the diversification of seaweed products (*Gliseria* sp) to enhance the welfare of MSMEs. The research employed primary data, gathered through detailed interviews and in-depth discussions with ten key informants, including MSME operators, local government officials, and experts in the field. The findings revealed that MSMEs in the study sample lacked adequate creativity and innovation in their efforts to diversify their seaweed products. This limitation hindered their ability to improve welfare and economic sustainability.

Fredrick et al. (2021) explored how entrepreneurial skillsets influence the performance of women-owned SMEs in Uasin Gishu County, Kenya. The study focused on the roles of innovation, proactiveness, and risk-taking, employing a correlational design and using questionnaires administered to 81 SME owners. Chi-square analysis revealed that all three dimensions of entrepreneurial orientation were significantly related to business performance. Similarly, Okoli et al. (2021) assessed the influence of entrepreneurial orientation on SME performance across five states in Southeast Nigeria. Using a survey approach and analyzing data from 366 SMEs through regression analysis, the study found that innovativeness, proactiveness, and risk-taking had a positive and significant impact on SME performance. The authors concluded that entrepreneurial-oriented firms often outperform competitors by embracing innovation and customer-centric strategies. Juliana et al. (2021) examined the interplay between creativity, innovation, and entrepreneurship development in Nigeria, guided by Schumpeterian theory. Utilizing a survey of 257 respondents and analyzing data via OLS and ANOVA, the study identified technological advancement and strategic thinking as key drivers of entrepreneurship. It also highlighted a strong link between creative thinking, innovative capabilities, and the advancement of entrepreneurship.

Miniaoui and Schilirò (2016) focus on the critical role of innovation and entrepreneurship in the diversification and growth of the Gulf Cooperation Council (GCC) economies, which are heavily dependent on petroleum reserves. The authors argue that, due to the high volatility and price reduction in oil, diversification is essential for the long-term economic stability of these nations. The paper highlights that diversified economies tend to outperform mono-sector

economies in the long run. Innovation and entrepreneurship are identified as key drivers of economic development, increasing competitiveness, and contributing to overall economic growth.

Mbasua et al. (2015) explored the major operational obstacles limiting the effectiveness of small enterprises in Gombe State, Nigeria. The study drew on both primary data—gathered through questionnaires—and secondary data from relevant documents. Using a cluster sampling method, one local government area was selected from each of the three senatorial districts, followed by random sampling to select 50 participants. Analysis was carried out using simple percentage techniques. The findings revealed that small business operators struggled with a range of structural and financial challenges, including poor management skills, insufficient capital, limited access to funding, and ineffective record-keeping practices. These constraints significantly impeded the growth and sustainability of small-scale enterprises in the region.

The study by Deligianni and Voudouris (2014) found that, in new ventures, the relationship between innovation and diversification is unidirectional, with innovation driving diversification. The study utilized two theoretical frameworks, the RBV and SCT, to examine this relationship. The RBV supports the view that firms first innovate to build a resource pool, which they then leverage for diversification. On the other hand, the SCT suggests that both innovation and diversification are driven by the founders' sociocognitive abilities and may occur simultaneously. However, the study's findings primarily support the unidirectional model, where innovation leads to diversification, especially in the context of new ventures striving for growth and stability.

3. Methodology

3.1. Research Design

The study employed a quantitative research design to gain a deeper and more holistic insight into the research problem. This approach enabled the incorporation of varied perspectives from key stakeholders—such as MSME owners, employees, customers, and policymakers—thereby offering a balanced and comprehensive understanding of the entrepreneurial ecosystem.

3.2. Area of the Study

The study was carried out in Anambra State, located in southeastern Nigeria. Bordered by Kogi, Enugu, Abia, Imo, and Delta states, Anambra lies at coordinates 6.2209° N and 6.9370° E, comprising 21 local government areas such as Awka North and South, Onitsha South, Nnewi North, and others. Awka, the state capital, serves as the administrative center, while other key towns include Onitsha and Nnewi. Anambra hosts several tertiary institutions and a range of public and private organizations. The state's economy is largely driven by commercial activities, with a vibrant presence of MSMEs engaged in trade, transport, education, healthcare, media, and light industry. Aptly known as the “Light of the Nation,” Anambra remains a major hub for entrepreneurial and economic activity in the region.

3.3. Population of the Study

The study population consisted of owners and management staff of registered Micro, Small, and Medium Enterprises (MSMEs) across the three geopolitical zones of Anambra State. Based on the 2022 report by the Anambra State Chamber of Commerce, a total of 1,919 registered MSMEs were identified in Onitsha South (Anambra North), Nnewi South (Anambra South), and Awka South (Anambra Central). The selection of MSMEs was guided by sectoral relevance and included enterprises in hospitality (hotels and fast-food businesses), hypermarkets, bakeries, beauty and hair salons, as well as various service-oriented firms such as consultancies and research organizations. These sectors were chosen due to their significant economic contributions within the state.

3.4. Sample Size Determination and Sampling Technique

To determine the appropriate sample size for the study, the Taro Yamane formula (1967) was employed. This formula is particularly suitable for studies involving a finite population and provides a simplified method for sample size determination. The formula is stated as

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

Sample size would be determined using the Taro Yamane's formula:

$$n = N / (1 + N(e)^2)$$

N = Population of Registered MSME

e = Error Ratio

$$n = 1919 / (1 + 1919(0.05)^2)$$

$$n = 331$$

Therefore, we adopt the sample size of this study as 331.

- The study utilized a Non-Probability Purposive Sampling Technique to select 331 registered MSMEs across the three geopolitical zones of Anambra State. This method was chosen due to the impracticality of reaching all MSMEs in the regions under review. Two non-probability sampling techniques were combined for this purpose:
- Convenience sampling: Participants were selected based on their availability and willingness to participate. This approach is easy to implement, though it may not perfectly represent the entire population.
- Theoretical purposive sampling: Participants were chosen for their ability to provide valuable insights into the specific research questions or theoretical concepts being explored. This method focused on individuals whose experiences or characteristics were particularly relevant to the study.

3.5. Sources of Data

The survey questionnaire was the core tool for primary data collection in this study, carefully designed to be the key instrument for obtaining detailed information on creative thinking skill. It played a crucial role in gathering comprehensive data that would support the study's objectives.

3.6. Method of Data Collection

This study employs a structured data collection approach using a five-point Likert scale questionnaire. The questionnaire is specifically designed to assess the perceptions, attitudes, and behaviors of MSME owners regarding creative thinking. The scale ranges from 1 ("strongly disagree") to 5 ("strongly agree"), enabling respondents to indicate varying levels of agreement or disagreement with each statement, thereby allowing for the capture of detailed and accurate opinions.

Table 1 Questionnaire Distribution, Collection and Analysis

S/N	Towns	Distributed	Retrieved	Analyzed
1	Awka	90	85	80
2	Onitsha	131	118	112
3	Nnewi	110	97	90
Total (Percentage)		331 (100%)	300 (90.6%)	282 (85.2%)

Source: Field Survey 2024

Table 1 illustrates the distribution, collection, and analysis of the questionnaires. As detailed in the table, 331 questionnaires were distributed according to the study's sample size. A total of 300 questionnaires were returned, representing 90.6% of those distributed. However, only 282 questionnaires, or 85.2% of the total distributed, were analyzed, as 18 questionnaires were excluded due to incomplete responses that could not effectively reflect the respondents' views.

3.7. Validity of the Instrument

The study employed content validity by submitting a copy of the developed questionnaire to my supervisor for assessment and revision. The questions were modified and restructured to align with the objectives of the study. As a result, the content of the questionnaire was deemed appropriate and relevant for the research.

3.8. Reliability of the Instrument

The study utilized the test-retest method to assess the reliability of the questionnaire. A total of 15 copies of the questionnaire were distributed to respondents at pharmaceutical companies (Emzor and Joez Pharmaceuticals Nigeria Ltd), which were not part of the main study sample. After a period of fifteen days, the questionnaire was revised and redistributed to the same set of respondents. The reliability of the responses was tested using Rank correlation analysis, yielding a reliability coefficient of 0.98, indicating that the instrument is highly reliable. Below is the table presenting the reliability figures.

Table 2 Reliability of the Instrument Test Table

Options	No of distributed questionnaire	Pre-test	Re-test	Differences (D)	D2
Strongly agree	15	5	7	-2	4
Agree	15	7	4	3	6
Disagree	15	2	2	0	0
Strongly Disagree	15	1	1	0	0
Undecided	15	0	1	-1	1
					$\Sigma d^2 = 11$

Source: Field survey, 2024.

$$\text{Formula: } 1 - \frac{6 \Sigma di^2}{n(n^2 - 1)}$$

d = deviation / differences

n = number of paired items

1= unity

Substituting,

$$r = \frac{6 \times 112}{15(152 - 1)}$$

$$r = \frac{1 - 66}{15(152 - 1)}$$

$$r = \frac{1 - 66}{3360}$$

$$r = 1 - 0.0196$$

$$r = 0.98$$

3.9. Method of Data Analysis

The study used descriptive tools such as frequency distributions, percentages, means, and standard deviations. These techniques were essential in examining the central tendencies and variability of the responses, facilitating a thorough analysis of the research objectives.

4. Data presentation and interpretation of Results

4.1. Data Analysis

4.1.1. Demographic Distribution

Table 3 Respondent Demographics

Demographic Variables	Categories	Frequency	Percentage
Gender	Male	110	39
	Female	172	61
Age Group	18 - 29 years	164	58
	30 - 39 years	68	24
	40 - 49 years	34	12
	50 - 59 years	16	6
Highest Educational Qualification	Diploma	80	28.3
	Bsc	116	41.4
	Msc	60	21.2
	PhD	26	9.1
Business Scale	Micro	85	29.9
	Small	119	42.3
	Medium	78	27.8
Combined Experience	Less than one year	29	10.6
	1 - 2 years	30	10.8
	2 - 5 years	43	15.1
	5 - 10 years	136	48.3
	10 - 15 years	26	9.1
	More than 15 years	18	6.1

Source: Field Survey 2024

Data collected from the survey questionnaire, administered to respondents over a five-month period from January to May 2024, is presented in Table 3. The first section of the survey focused on demographic information. The sample consisted of personnel from 282 MSMEs across the three geopolitical zones of Anambra State who completed the questionnaire. Additionally, the questionnaires were distributed via email, and participants were reminded to fill them out every two weeks. In terms of demographics, 39% of respondents were male, and 61% were female. A significant portion of participants (58%) fell within the age range of 18 to 29 years. Regarding education, 41.4% held a bachelor's degree, while 21.2% held a master's degree. The majority (48.3%) of participants had between five to ten years of experience. In terms of company size, 27.8% represented medium-sized SMEs, 42.3% were small firms, and 29.9% were micro-sized businesses. The frequency percentage was calculated using the formula: $\text{Percentage} = (\text{Frequency of occurrence} / \text{Total number of respondents}) \times 100$.

4.2. Relationship between Creative thinking and Product diversification

Table 4 Distribution of Responses for Critical Thinking and Product Diversification

Questionnaire Item	SA	A	UD	D	SD	Mean	Decision
Creative Thinking							
Generating new idea improves product?	138	141	3	-	-	4.47	Accepted
Critical thinking in developing new products or services is important?	99	183	-	-	-	4.35	Accepted
Critical thinking has led to product diversification in your business?	54	116	21	89	2	3.46	Accepted
Encouraging my team to brainstorm and share new ideas develops new product?	50	122	19	91	-	3.67	Accepted
Product Diversification							
Offering a variety of products/services to meet different customer needs has sustained my business?	59	124	34	62	3	3.83	Accepted
Diversifying your product range is important for sustainability?	29	167	29	57	-	3.59	Accepted
Diversification positively impacts business growth?	56	160	23	39	4	3.80	Accepted
Offering new product/services based on customer feedback has sustained your business?	41	115	44	78	4	3.40	Accepted

Source: Field Survey 2024

Table 4 presents the distribution of responses related to critical thinking and product diversification. The analysis was based on the mean scores of the relevant questionnaire items, with a threshold of 3 or above indicating acceptance, while items scoring below 3 were rejected. The results revealed that all items related to critical thinking and product diversification were positively affirmed. Respondents agreed that generating new ideas enhances product development, critical thinking is essential for creating new products or services, and it has significantly contributed to product diversification in their businesses. Additionally, they agreed that promoting team brainstorming sessions aids in the creation of new products, offering a variety of products or services to cater to diverse customer needs has helped sustain their businesses, diversifying product ranges is critical for sustainability, diversification positively influences business growth, and introducing new products or services based on customer feedback has supported their business sustainability.

4.3. Hypothesis Testing

A positive correlation indicates that when one variable increases, the other variable also increases, and similarly, when one variable decreases, the other decreases as well.

- Decision Rule: Reject the null hypothesis and accept the alternative hypothesis if the p-value is less than 0.05; otherwise, accept the null hypothesis.
- H01: There is no significant relationship between creative thinking skill and product diversification among MSMEs in Anambra State.
- HA1: There is a significant relationship between creative thinking skill and product diversification among MSMEs in Anambra State.

Table 5 Correlation between Creative Thinking and Product Diversification

Correlations			
		Creative Thinking	Product Diversification
Creative thinking	Pearson Correlation	1	0.678
	Sig. (2-tailed)		0.038
	N	282	282
Product Diversification	Pearson Correlation	.678	1
	Sig. (2-tailed)	.038	
	N	282	282

Source: SPSS ver. 23 Outputs.

4.4. Result Summary

Table 5 shows that there is significant relationship between creative thinking and product diversification with $r = 0.678$, $n = 282$ and p value of 0.038 ($p < 0.05$). Therefore, we reject the null hypothesis and conclude that there is a positive relationship between creative thinking and product diversification of MSME in Anambra State.

5. Discussion of Findings

This study examined the impact of creative thinking on product diversification, revealing a significant effect with a correlation of $r = 0.678$, $n = 282$, and a p -value of 0.038 ($p < 0.05$). This result suggests that the hypothesis 1 is supported, indicating a positive relationship between creative thinking and product diversification. The findings align with previous research, including studies by Fredrick et al. (2021), Okoli et al. (2021), and Mbasua et al. (2015), which emphasize the importance of entrepreneurial skills like creative thinking in fostering the growth and sustainability of MSMEs.

The research sub-question explores, "How do MSME owners perceive the role of creative thinking in product diversification in Anambra State?" The study's objective is "To investigate the extent of the relationship between creative thinking and product diversification among MSMEs in Anambra State."

Creative thinking drives the generation of innovative ideas and solutions, leading to a wider range of products. This diversification enables MSMEs to meet varied customer demands, reduce reliance on a single product, and distribute risk. Consequently, businesses can expand their customer base, strengthen their market position, and enhance their prospects for long-term survival. The positive correlation suggests that increased creative thinking leads to greater product diversification, boosting the resilience and adaptability of MSMEs.

6. Conclusion And Recommendations

The research underscored the central role that critical thinking plays in determining the direction of small and medium-sized enterprises (SMEs), especially towards diversification of products and long-term viability. It became apparent that aside from day-to-day managerial responsibility, the capacity of entrepreneurs and their employees to think critically, challenge assumptions, objectively analyze opportunities, and make soundly informed decisions, is the key driver of significant innovation in the SME sector. The study identified that in a more volatile and competitive economic environment, the sustainability of SMEs depends less on raw operation activity and more on the excellence of strategic thinking that oversees those operations. Critical thinking came to being not only as a soft skill, but as the very pillar that empowers SMEs to critically analyze market conditions, react quickly, and put in place diversification policies that are appropriate and robust. Therefore, the study concluded that SMEs with critical thinking integrated into business philosophy at the center of their operations have high prospects of surviving economic stresses, understanding budding opportunities, and becoming competitive in a better marketplace. In light of the fact that critical thinking goes a great distance in product diversification and long-term viability in SMEs, one policy recommendation is that the government and development institutions must institute formal capacity-building programs with the aim of enhancing the critical thinking and innovation abilities of SME workers and entrepreneurs.

These can be addressed through subsidised innovation training courses, entrepreneurship development courses with modules on critical thinking, and incentive schemes for implementing businesses systematic processes of innovation. These steps would give SMEs intellectual capability to generate strategic innovation, increased responsiveness to the marketplace, and business growth in a competitive and changing economy.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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