Effect of Entrepreneurial Mindset on Performance of SMES in Delta State, Nigeria

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Abstract
The recent challenges confronting small and medium enterprises' performance have become a serious debate in emerging economies like Nigeria. The objective of the study is to examine the effect of entrepreneurial mindset on the performance of SMEs in Delta State, Nigeria. To achieve this objective, this study postulated three research hypotheses on the effect of opportunity recognition, risk-taking, and innovativeness on SME performance. The study adopted a quantitative research design, using a descriptive approach and cross cross-sectional survey design. The study adopted a primary source through a structured questionnaire. The population of the study is 39,664. While the sample size is 570 (Krejcie & Morgan, 1970; Salkind's 1990). The study adopted a stratified sampling technique. The method of data analysis is descriptive and correlation analysis. Out of 570 questionnaires administered, the study was able to retrieve 421 from owners/managers of SMEs in Delta State, Nigeria. The data was analyzed using Statistical Package for the Social Sciences (SPSS). The findings found that the entrepreneurial mindset has a significant effect on SME performance in Delta State, Nigeria. Hence, the study empirically found that opportunity recognition, risk-taking, innovativeness, and entrepreneurial intention have a significant effect on SME performance. Therefore, it is recommended that managers of SMEs should use an entrepreneurial mindset as an avenue to recognize business opportunities, take calculated risks and increase investments in innovativeness, in order to achieve optimum performance, and boost profitability and competitiveness in domestic and international market scenes.

Keywords: SME performance, entrepreneurial mindset, opportunity recognition, risk-taking, innovativeness.

1.1 Introduction

SMEs globally face challenges related to economic volatility, access to finance, and high operating costs. Economic downturns, fluctuations in market demand, and limited access to credit can hinder growth and sustainability (Molete ET AL, 2025; World Bank, 20203). The rapid pace of technological change presents both opportunities and challenges for SMEs. While technology adoption can enhance productivity and competitiveness, SMEs often struggle with the costs of implementation, digital skills gaps among employees, and cybersecurity threats (European Commission, 2022).

Thus, the challenges faced by SMEs can be classified as external and internal issues. One of the most pervasive challenges faced by SMEs globally is access to finance. SMEs often struggle to secure necessary funding due to stringent lending requirements imposed by traditional financial institutions. According to the World Bank, around 70% of small businesses in developing countries lack access to credit, resulting in a financing gap of approximately $5.2 trillion annually (World Bank, 2020). This financial constraint limits the ability of SMEs to invest in growth opportunities, innovate, and compete effectively in the market.

Gaining access to larger markets is another significant hurdle for SMEs. Limited resources and a lack of established networks can make it difficult for SMEs to penetrate new markets and expand their customer base. A report by the International Trade Centre (ITC) highlights that

DOI: https://doi.org/10.5281/zenodo.18073706

SMES account for 90% of businesses and 50% of employment worldwide, yet they contribute less than 40% to GDP in emerging markets due to market access barriers (ITC, 2018). This disparity underscores the need for better support mechanisms to help SMEs navigate international trade regulations and enhance their market presence.

Global events, such as the COVID-19 pandemic, have exacerbated existing challenges for SMEs. The pandemic has led to unprecedented disruptions in supply chains, reduced consumer demand, and increased operational uncertainties. According to a report by the International Labour Organization (ILO), more than 70% of SMES reported experiencing a significant decrease in revenue during the pandemic, with many facing the risk of permanent closure (ILO, 2021). This highlights the vulnerability of SMEs to external shocks and the importance of building resilience through diversification and crisis management strategies. Globally, SMEs face significant regulatory hurdles that can impede their operations and growth. These include complex tax regimes, labor laws, and compliance requirements. The Organisation for Economic Co-operation and Development (OECD) highlights that regulatory compliance costs are disproportionately higher for SMEs compared to larger firms (OECD, 2019).

SMES performance across the globe has recorded unsatisfactory performance as regards contribution to GDP and employment generation, especially in countries such as Greece, Iran, Vietnam, Nigeria, and Romania (Nesta, 2017). Also, Igwe, Onjewu, and Nwibo (2018) contend that the underperformance phenomenon among SMEs, combined with the world's youngest population, has heightened unemployment growth. Likewise, Beck and Cull (2014) noted that in many African countries, SMEs, find it difficult to do business and make significant profits to survive.

SMES in Nigeria are characterized by their incapacity to withstand most of the risks and uncertainties that business organizations face, even though they are acknowledged as the pivot for development. Their performance is directly impacted by this, which makes it more difficult for them to achieve economic sustainability (Isaac, et al., 2023). Additionally, Leithy (2017) maintained that SMEs in Nigeria contributed low to GDP compared to SMEs in Asia and the USA, which contributed about 40% and 50% of GDP. Hence, there are some forces behind their underperformance and low profitability in Nigeria. Furthermore, Leithy (2017) and Anichebe and Agu (2013) maintained that a major challenge for SMEs is to constantly improve performance in the long term in this highly competitive environment. Hence, several SMES have been characterized by poor performance as most shut down before their fifth anniversary.

In Nigeria, the regulatory environment is often characterized by bureaucratic red tape, corruption, and inconsistent policies, which further complicate the operating landscape for SMEs (Olawale & Garwe, 2010). Simplifying regulatory processes and ensuring consistency in policy implementation are crucial steps towards alleviating these burdens. In Nigeria, the digital divide is more pronounced, with many SMEs lacking access to the internet and digital tools necessary for modern business operations (Asaolu et al., 2012). Bridging this gap is essential for enhancing the competitiveness of Nigerian SMEs in the global market.

The financial constraints are a significant issue for SMEs globally and are particularly pronounced in Nigeria. SMEs worldwide often face difficulties in securing financing due to stringent lending requirements and high interest rates. This challenge is exacerbated in Nigeria, where the financial sector is less developed compared too many other countries. According to the World Bank, around 40% of Nigerian SMEs cite access to finance as a major constraint to their growth (World Bank, 2020). The lack of access to affordable credit limits the ability of these businesses to invest in expansion, technology, and skilled labor, thereby stifling their growth and competitiveness.

Access to markets is another critical challenge for SMEs both globally and in Nigeria. Limited market access can hinder the growth potential of SMEs by restricting their customer base and revenue streams. The International Trade Centre (ITC) reports that SMEs often struggle to penetrate new markets due to a lack of market information, poor infrastructure, and

DOI: https://doi.org/10.5281/zenodo.18073706

competition from larger firms (ITC, 2018). In Nigeria, this issue is compounded by inadequate transport and logistics infrastructure, which makes it difficult for SMEs to reach broader markets, both domestically and internationally (Akinyemi, 2016).

In Nigeria, the impact has been severe, with many SMEs experiencing reduced sales and operational challenges due to lockdowns and movement restrictions (Olumuyiwa, 2020). Building resilience through diversification, innovation, and robust crisis management strategies is essential for SMEs to navigate such global disruptions. In addition to the common global challenges, Nigerian SMEs face unique issues that affect their performance. One such challenge is the unreliable power supply, which significantly increases operational costs. A survey by the Nigerian Association of Chambers of Commerce, Industry, Mines, and Agriculture (NACCIMA) found that power outages lead to an average loss of 17% of annual sales for Nigerian SMEs (NACCIMA, 2019). Moreover, the high cost of alternative power sources, such as generators, further erodes profit margins.

A business's or performance's success is caused by numerous things.SMEs must, on the one han, compete with larger businesses and their peers in order to satisfy the everchanging and growing needs of their clientele (Ndubisi & Iftikhar, 2023). However, they must contend with several internal and external obstacles. According to Oyeku et al. (2023), the greatest determinant of a business's success may be the entrepreneur himself or herself, with his or her own strengths identified and the capacity to assemble a winning team with complementary skills and talents to address his or her own weaknesses. As a result, business performance or success is the result of the interaction of many factors. This perspective is in line with the claims made by Frese (2022) and Baum et al. (2023) that individual skills and behaviors/actions are essential to a company's success.

SMES performance has always been a major concern among entrepreneurs and researchers across the globe. Consequently, SMEs' performance has been described as the accomplishment of organizational goals (Cubin, 2019), in terms of increase in sales, profitability, high return, as well as stakeholder and customer satisfaction (Vivian & Ihinmoyan, 2022). Yet, others have equated it with business success (Oluwaseun et al., 2020), business growth/expansion (Lombardi et al., 2020; Ummah, 2019), sustainability (Ajor & Joy, 2020), and sustainable competitive advantage (Farery & Nyang'au, 2021). Therefore, performance is generally crucial for the growth, survival, sustainability, and competitiveness of SMEs. Nevertheless, unlike SMEs in developed economies like the USA, Europe, and some Asian countries (World Bank, 2019), many SMEs in Africa and Nigeria, in particular, are underperforming (Leithy, 2017), due to low entrepreneurial spirit and lack of entrepreneurial mindsets (Oluwaseun et al., 2020).

But then, it was universally established that an entrepreneurial mindset is key for enhanced business performance (Nielsen, Christensen & Storvang, 2021). Notwithstanding, the entrepreneurial mindset is a multifaceted concept involving – opportunity recognition, risk-taking, and innovativeness. However, the effect of an entrepreneurial mindset and its dimensions on SME performance is found to be positive and significant. However, sometimes the reverse is the case, as an insignificant effect was reported by Suheryanto and Ie (2023) and also, and Vivian and Ihinmoyan (2022) found an inverse relationship between entrepreneurial mindset and SME performance.

Accordingly, the literature showed that many factors are responsible for SMEs' performance (Ndubisi & Iftikhar, 2012). However, SMEs are constrained by a number of challenges and cannot improve their performance level (SMEDAN, 2021). Oyeku et al. (2014) argued that the performance of SMEs is solely the responsibility of an entrepreneur. Hence, developing an entrepreneurial mindset and intention is key to SMEs' performance. Notwithstanding, Oluwaseun et al. (2020) position the gains that having an entrepreneurial mindset such as opportunity recognition, risk-taking, and innovativeness, can offer entrepreneurs the ability to improve SME performance in a challenging environment. Perhaps, the inability of the SME owner/manager's inability to display an effective

DOI: https://doi.org/10.5281/zenodo.18073706

entrepreneurial mindset could be responsible for the declining performance of SMEs.

Yet, According to Ukenna, Makinde, Akinlabi, and Asikhia (2019), one of the numerous potential causes of SMEs' failure is the attitude of personnel in charge of running the company. Hence, literature has established a link between entrepreneurial mindset – opportunity recognition, risk-taking, innovativeness, and SME performance (Nielsen, Christensen & Storvang, 2021); as well as entrepreneurial intention and SME performance (Changalima, Ismail, & Amani, 2025; Karimi, Ngina & David, 2023; Panigrahi, Shrivastava, & Nudurupati, 2024). Jemal (2020) recommended further research on the effect of an entrepreneurial mindset on SME performance. Similarly, Karimi, Ngina, and David (2023) and Ebdane and Samar (2019) recommended testing the effect of entrepreneurial intention as either a mediator or moderator in the stream of entrepreneurial mindset and SME performance research.

SME performance has always been a major challenge among entrepreneurs across the globe (Nesta, 2017; Changalima et al, 2025; Anichebe & Agu, 2013). Also, the concept of SME performance is contradictory, as scholars have described the concept in terms of accomplishment of organizational objectives using criteria like sales, profitability, high return, as well as stakeholder and customer satisfaction (Vivian & Ihinmoyan, 2022; Cubin, 2019). Yet, scholars have equated SME performance with business success (Oluwaseun et al., 2023), business growth and expansion (Lombardi et al., 2020; Ummah, 2019), sustainability (Ajor & Joy, 2020), and sustainable competitive advantage (Farery & Nyang'au, 2021).

Nevertheless, literature established that an entrepreneurial mindset is key to enhanced performance among SMEs (Nielsen, Christensen & Storvang, 2021). Notwithstanding, the entrepreneurial mindset is a multifaceted concept involving opportunity recognition, risk-taking, and innovativeness (Suheryanto & Ie, 2023; Farery & Nyang'au, 2021). The effect of an entrepreneurial mindset and its dimensions on SME performance has been established as positive and significant (Jemal, 2020). However, sometimes an insignificant effect was reported (Suheryanto & Ie, 2023). Additionally, Vivian and Ihinmoyan (2022) have empirically established an inverse relationship between entrepreneurial mindset and SME performance.

Consequently, Daspit, Fox, and Findley (2023) and Jemal (2020) recommended quantitative research on the effect of entrepreneurial mindset on SME performance, with a possible moderator/mediator. Similarly, Karimi, Ngina, and David (2023) and Ebdane and Samar (2019) recommended testing the effect of entrepreneurial intention as either a mediator or moderator in the stream of entrepreneurial mindset and SME performance research. Therefore, this study intends to examine how entrepreneurial intention moderates the effect of entrepreneurial mindset opportunity recognition, risk-taking, and innovativeness on SME performance in Delta State.

2.1 Underpinning Theory

Based on the theoretical review, this study will be underpinned by RBV supported by competency theory because the theories present a holistic view on the influence of entrepreneurial mindsets such as opportunity recognition, risk taking and innovation, as well as entrepreneurial intention on the performance of small and medium enterprises.

2.1.1 Resource-Based View (RBV)

The RBV emphasizes the significance of utilizing unique resources that are rare, valuable, non-substitutable, and inimitable (VRIN) (Barney, 1991). RBV is not without criticism. One significant criticism is it fixed nature, as it often ignores the changing nature of resources and abilities in response to different situations (Singh & Mehdi, 2022). Critics argues that RBV does not fully consider the impact of context and circumstances on firm performance, limiting its explanatory power in certain situations. Also, RBV have been accused of neglecting external factors like market conditions and industry dynamics that can greatly influence entrepreneurial activities (Liu et al., 2019). Despite this critique, RBV remains a valuable framework for studying how moderating effect of entrepreneurial intention on

DOI: https://doi.org/10.5281/zenodo.18073706

entrepreneurial mindset influences performance of the SMES in Delta State, Nigeria.

2.1.2 Competency Theory of Action Phases

Competencies encompass knowledge (what the entrepreneur knows), skills (what the entrepreneur can do), abilities (the capacity to perform across different situations), and other characteristics like values, temperament, or self-image (Farery and Nyang'au, 2021). Crucially, effective competencies are measurable and distinguish superior performers from others. In other words, one can often observe differences in how a highly competent entrepreneur operates versus an average performer for instance, in their strategic planning acumen, their negotiation effectiveness, or their adaptability to change.

2.2 Literature Reviews

Scholars have described entrepreneurial mindset as entrepreneurial orientation (Karimi, Ngina & David, 2023), entrepreneurial behavior (Amir, Burhanuddin & Priatna, 2018), and entrepreneurial attitude (Suheryanto & Ie, 2023). While an entrepreneurial mindset is an orientation that manifests through innovation, creativity, business alertness, and risk-taking (Njeru, 2012). On the other hand, entrepreneurial mindset as attitude, according to Choe et al. (2020) has several dimensions that involves achievement, personal control, innovation and opportunity recognition. Yet, entrepreneurial mindset as behavior, according to Amir et al. (2018) is conceptualized in terms of opportunities responsiveness, innovativeness, risk taking and persistence in doing business. These contain the dimensions of entrepreneurial mindset dimensions (Opportunity Recognition, Risk-Taking, and Innovativeness).

EO has been called a strategic orientation of the firm (Khandwalla, 1976). A firm behaves entrepreneurially when consistently displaying a strategic posture characterized by innovativeness, proactiveness, and risk-taking behaviors (Anderson & Eshima, 2013). The most common and broad conceptualization of EO suggests that EO represents the shared variance of these three entrepreneurial behaviors (Covin & Wales, 2012). EO is conceptualized as a composite firm-level construct, an organization-level phenomenon with a unidimensional strategic orientation (Covin & Slevin, 1989).

In the resource-based view framework, EO can be viewed as a strategic posture and an organizational resource that is valuable, rare, and inimitable and used by firms to gain a competitive advantage (Barney, 1991; Newbert, 2007). Two meta-analyses of EO studies found that the correlation of EO with performance was moderate (Rauch et al., 2009; Saeed et al., 2014). Though it is broadly understood that EO leads to improved firm performance, however, (1) the magnitude of the relationship varied greatly across EO studies (Rauch et al., 2009), and (2) some studies found higher correlations (Wiklund & Shepherd, 2003), some had low correlations (Dimitratos et al., 2004), while some found no significant relationship (George et al., 2001). Though the direct effect of EO on firm performance has been tested before, using a different measure of the dependent variable and the mixed nature of past results leads to the hypothesis to provide clarity to the ongoing debate.

HPWS is grounded in the understanding that the human capital of a firm can be a source of competitive advantage and includes procedures and practices of recruitment, selection, incentives, performance management, training and development, and compensation that enable a firm to attract, develop, motivate and retain their employees (Huselid, 1995). Human capital resources included the firm's employees' skills, judgment, intelligence, and competencies (Barney & Wright, 1998). Human capital resource practices' primary task was managing people and aligning them to the organization's strategic intent (Wright et al., 1994). HPWS focuses purely on employee management practices that enhance the firm's human capital. HPWS includes the firm's human capital resources (people) and the various competencies, capabilities, and skills they possess. The mutually reinforcing effects of groups of human resource practices in developing the human capital resources of the firm led to the concept of a bundle denoted by HPWS. These groups of human resource

DOI: https://doi.org/10.5281/zenodo.18073706

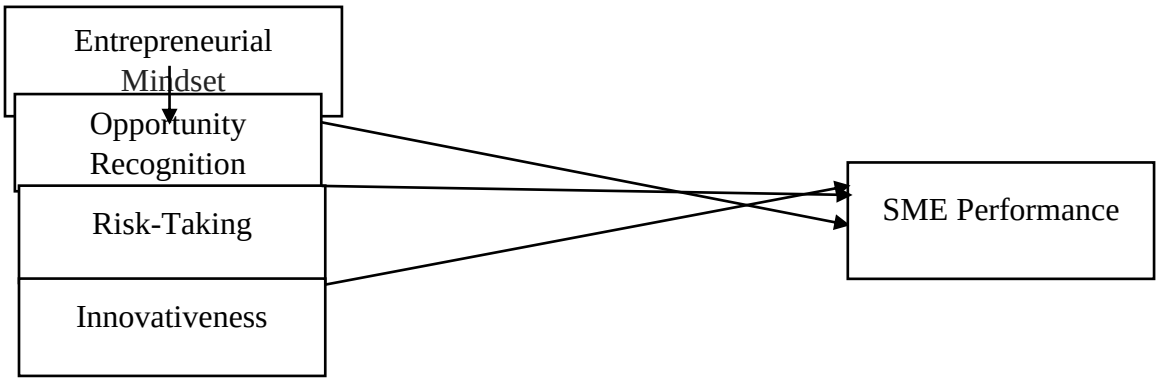
practices within HPWS are internally consistent and mutually reinforcing and deliver a net benefit to the firm (Patel & Conklin, 2012).

There has been a long and inconclusive debate on the potential for HR practices to generate a competitive advantage. One stream of research distinguished human capital from HR practices (HPWS) and suggested that HPWS could not form the basis of competitive advantage because competitors can easily imitate them. They argued that the human capital pool had a stronger and closer fit with the valuable, rareness, imitability, and substitutability criteria of the resource-based view of the firm (Wright et al., 1994). Another stream of research took a contrasting perspective by arguing that HPWS (a set of human resource practices) could be difficult to imitate because the interdependencies and complementarities between the individual HR practices were socially complex, historically evolved, and causally ambiguous. In their view, HR practices (HPWS) could be a source of competitive advantage (Lado & Wilson, 1994). Within this debate, HPWS is posited to develop human capital competence and benefit the firm's performance, leading to the second hypothesis. The study raised below hypothesis:

Hypothesis One: Opportunity Recognition has no significant effect on SME Performance in Delta State.

Hypothesis Two: Risk-Taking has no significant effect on SME Performance in Delta State

Hypothesis Three: Innovativeness has no any significant effect on SME Performance in Delta State.



Source: Conceptual Framework, 2025

3.1 Materials and Methods

A questionnaire method of data collection is employed in this study, because it enables respondents the liberty to select response from a wide range of responses. Also, the questionnaire method employed, in line with the prior studies recommendations and because it is easier to get in touch with a sizable number of SMEs' owners / managers in Delta State. Accordingly, the questionnaire were used to contain both nominal, ordinal and 5 Likert scales. The nominal and ordinal scales are meant to collect demographic information of respondents. On the other hand, 5 Likert scale is designed to collect responses from respondents related to variables, using structured questions ranging from Strongly Agree (SA) = 1; Agree (A) = 2; Neutral (N) = 3; Disagree (D) = 4; to Strongly Disagree (SD) = 5.

Furthermore, it will be broken down into four (4) sections, which are labelled A, B, C and D respectively. Section A comprised of questions pertaining to the respondent's personal data, and sections B, C and D comprised of structured questions designed to elicit the responses of respondents related to entrepreneurial mindset opportunity recognition, risk taking, innovativeness, entrepreneurial intention and SMEs performance. Therefore, the population of this study consists of 39,664 SMEs in Delta State, Nigeria (SMEDAN, 2024). The sample

DOI: https://doi.org/10.5281/zenodo.18073706

size is 380 SMEs based on the sample size determination table of Krejcie and Morgan (1970). Notwithstanding, in line with Salkind's (1990) to avoid a low response rate, the sample size is increased by 50%, in order to avoid a low response rate, and thus, accounting for a total sample size of 570 SMEs. This study adopted a systematic sampling technique as it gives every element in the population equal opportunity to be chosen. The data was analyzed by using SPSS version 22 and PLS-SEM, to run preliminary analysis, descriptive statistics, and inferential statistical analysis, in order to establish causality between variables (Ayemere, Shua'ra, & Mohammed, 2025). This conforms to the suggestion of Hair et al. (2019) and Pallant (2011) on the adoption of the method in analyzing causal effects among variables, especially in management research.

In this study, all the measurement that measure the research variables were adopted from the prior studies. Hence, the measures for opportunity recognition involve six (6) questions adopted from Farery and Nyang'au (2021). The measures for risk taking involves five (5) questions adopted from Khan et al. (2023). The measures for innovativeness involves three (3) questions adopted from Alvarez-Torres et al. (2019). The measures for SMEs performance involves five (5) questions adopted from Khan et al. (2023).

The reliability of the research instruments (that is the questionnaire) was tested by carrying out a pilot test. This means administering the questionnaire to thirty (30) managers / owners of SMEs in Delta State. The reliability of the content of the research instrument is evaluated through the Reliability test with the application of SPSS version 22. The outcome of the analysis demonstrated high reliability level of the questionnaire above 0.7.

4.1 Analysis

The SPSS was used for data cleaning, descriptive statistics, instrumentation and testing the assumptions of multiple regression such as normality, multicollinearity, linearity and heteroscedasticity. Based on the sample size and response rate, this study distributed 570 questionnaires to the owners and managers of SMEs in Delta State, Nigeria. Interestingly, 421 questionnaires were properly completed and returned. While, 149 questionnaires were not returned. Accounting for valid response rate of 74% and 26% of unreturned questionnaires.

The data cleaning was done after keyed into the SPSS by assessing missing values and treatment of outliers. Missing value is the nonappearance of numbers, figures or scores in a dataset. Accordingly, the missing values were checked and it was found that there were no missing values, as the questionnaire was properly completed by respondents and data was correctly inputted into SPSS. Hence, no missing values were noticed in the data. Outliers are extreme numbers, figures, values or scores in a dataset. Accordingly, the outliers were assessed in this study, using univariate outliers in which any value 3.29 is described as outlier. Based on the findings, the study detected questionnaire 118 and 330 as outliers, and were out rightly deleted from the dataset.

4.1.1 Descriptive Statistics

The empirical outcome depicted or displayed in Table 4.2 suggested that most people who responded to the survey are male (357), accounting for 85.2% of the total respondents. On the other hand, the number of female respondents was 62, accounting for 15.8% of the total respondents. About the age respondents, 147 respondents are within age bracket 31 – 40 years, 135 respondents are within age bracket 18 -30 years, 75 respondents are within age bracket 41 – 50 years, and lastly, 62 respondents are above 51 years of age, accounting for 35.1%, 32.2%, 17.9% and 14.8% of the total respondents. Regarding educational qualification, the results showed that 147 respondents have Diploma or NCE, 75 respondents have PhD, 73 respondents have Masters, 62 respondents have Bachelor Degree, and 62 respondents have other types of educational qualifications, accounting for 35.1%, 17.9%, 17.4%, 14.8% and 14.8% of the total respondents.

In terms of business sectors, 77 respondents engage in Agricultural businesses, 74 respondents operate in Hotel and Tourism sector, 73 respondents deal in Clothing and

DOI: https://doi.org/10.5281/zenodo.18073706

Textile material, 62 respondents operate a Tailoring and Fashion Design shops, 61 respondents operate in Food and Beverage industry, and 36 respondents operate in Leather and Shoes subsector. Yet, 36 respondents engage in other type of business activities.

4.1.2 Mean and Standard Deviation

Mean which is universally referred to, or commonly known as measure of central tendency. On the other hand, the term standard deviation is referred to as measure of dispersion. The aim is to determine the average scores of variables in a data and also highlight the variability index of variable in the data. Accordingly, mean and standard deviation were tested by means of utilizing Descriptive function of SPSS and the result was shown in Table 1. Based on the findings, all variables in the study have the average scores and standard deviation values that ranges from 3.9901 to 4.3413, and .83130 to 1.16315, respectively.

Table 1: Mean and Standard Deviation

	Variables	Mean	Standard Deviation
1.	**SME Performance**	**4.0148**	**1.13199**
2.	**Opportunity Recognition**	**4.3413**	**.83130**
3.	**Risk Taking**	**4.2964**	**1.02768**
4.	**Innovativeness**	**4.3238**	**1.16315**

Source: Survey, 2025

4.1.3 Reliability Analysis

This analysis was evaluated by ascertaining the magnitude of Cronbach's Alpha as it has been described as a good measure of reliability (Pallant, 2011). Accordingly, this study tested the reliability of instrument using Cronbach' Alpha. The findings in Table 2 showed that SME performance has reliability coefficient of 0.91, opportunity recognition has reliability coefficient of 0.85, risk taking has reliability coefficient of 0.88, innovativeness has reliability coefficient of 0.97 and entrepreneurial intention has reliability coefficient of 0.82. Based on the outcome in Table 4.4, the instruments that measured research variables have adequate reliability level.

Table 2: Reliability Analysis

	Variables	Items	Cronbach's Alpha
1.	Performance	5	0.91
2.	Opportunity Recognition	6	0.85
3.	Risk Taking	5	0.88
4.	Innovativeness	3	0.97

Source: Reliability Analysis Output, 2025

4.1.4 Factor Analysis

Factor analysis was done to assess items in the questionnaire and confirm whether they are valid to measure research variables. In line with this assertion, principal component analysis was employed and items were subjected to varimax rotation, in which factor loadings above 0.4 was used as benchmark to establish whether items that measure research variables are valid or otherwise. According to statistical outcome, items that measure SME performance have a sufficient level of validity, with strong factor loadings above 0.4. Similarly, Table 3 displayed that the value of Total Variance Explained, Bartlett's Test of Sphericity and KMO ranging from 95.972, 0.792, to 10, are significant at less than 0.01.

Table 3: Factor Analysis for Performance

DOI: https://doi.org/10.5281/zenodo.18073706

	Component	
	1	2
PF1	.955	
PF2	.946	
PF3	.960	
PF4	.989	
PF5		.955
Total Variance Explained	73.572	95.972
KMO		0.792
Bartlett's Test of Sphericity		10
Significance		0.00

Source: Factor Analysis for Performance Output, 2025

Also, the result highlighted that all the questions used in this study as measure of opportunity recognition have robust level of validity, with strong factor loadings above 0.4. Accordingly, Table 4 indicated that the value of Total Variance Explained, Bartlett's Test of Sphericity and KMO, ranging from 84.179, 0.770, to 15, are significant at less than 0.01.

Table 4: Factor Analysis for Opportunity Recognition

	Component	
	1	2
OPR1	.942	
OPR2	.937	
OPR3	.941	
OPR4	.958	
OPR5		.850
OPR6		.851
Total Variance Explained	59.630	84.179
KMO		0.770
Bartlett's Test of Sphericity		15
Significance		0.00

Source: Reliability Analysis for Opportunity Recognition Output, 2025

Similarly, the outcome demonstrated that all questions used in this study to measure risk-taking (with exception of RTK5) have adequate loadings above 0.4. Likewise, Table 5 portrayed that the value of Total Variance Explained, Bartlett's Test of Sphericity and KMO, ranging from 73.661, 0.839, to 10, are significant at less than 0.01.

Table 5: Factor Analysis for Risk Taking

	Component
	1
RTK1	**.925**
RTK2	**.962**
RTK3	**.939**
RTK4	**.972**
RTK5	
Total Variance Explained	**73.661**
KMO	**0.839**
Bartlett's Test of Sphericity	**10**
Significance	**0.00**

DOI: https://doi.org/10.5281/zenodo.18073706

Source: Factor Analysis for Risk Taking output, 2025

Correspondingly, the outcome revealed that all questions used in this study to measure innovativeness, demonstrated acceptable validity level with strong loadings above 0.4. Yet, Table 6 specified that the value of Total Variance Explained, Bartlett's Test of Sphericity and KMO, ranging from 97.123, 0.733, to 3, are significant at less than 0.01.

Table 6: Factor Analysis for Innovativeness

	Component
	1
INNV1	.982
INNV2	.993
INNV3	.982
Total Variance Explained	97.123
KMO	0.733
Bartlett's Test of Sphericity	3
Significance	0.00

Source: Factor Analysis for Innovativeness output, 2025

4.2 Assumptions of Multiple Regression

These assumptions encompassed statistical evaluation and approaches in the form of normality, multicollinearity, linearity and heteroscedasticity tests.

4.2.1 Normality

In empirical study, normality is tested in order to determine correctness of data, and its robustness in portraying regular distribution, which confirmed its suitability for further statistical testing or otherwise. Accordingly, the normally is empirically tested by checking the values of skewness and kurtosis. The outcome in Table 7 showed that the data is not skewed in one side, as value of skewness and kurtosis ranges from -.741 to -1.718 and -.215 to 1.583. Hence, research data is evenly spread, and also, skewness and kurtosis values are satisfactory.

Table 7: Normality Test

	Variables	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
1.	Performance	-.741	.119	-1.179	.238
2.	Opportunity Recognition	-1.092	.119	-.215	.238
3.	Risk Taking	-1.490	.119	.680	.238
4.	Innovativeness	-1.718	.119	1.583	.238

Source: Normality Test output, 2025

4.2.2 Multicollinearity

In this study, multicollinearity problem is tested in order to determine if extreme correlation exists between research variables. Accordingly, this study assessed multicollinearity using the values of tolerance and variance and inflation factor (VIF) as suggested by Pallant (2011). Based on the outcome in Table 8, there is no multicollinearity problem, as VIF value is less than 10, and yet, the degree of tolerance is less than 1. Hence, there is no multicollinearity problem in this study, as the values fall within the acceptable threshold.

DOI: https://doi.org/10.5281/zenodo.18073706

Table 8: Tolerance and VIF

	Variables	Tolerance	VIF
1.	Opportunity Recognition	.361	2.768
2.	Risk Taking	.507	1.971
3.	Innovativeness	.177	5.656

Source: Tolerance and VIF output, 2025

4.2.3 Linearity

The linearity assumption is checked using Normal Probability Plot, whereby the width has to be connected with the band, in order to demonstrate linear relationship between research variables (in a straight line). Therefore, the result in Figure 2 showed that the linearity assumption is achieved.

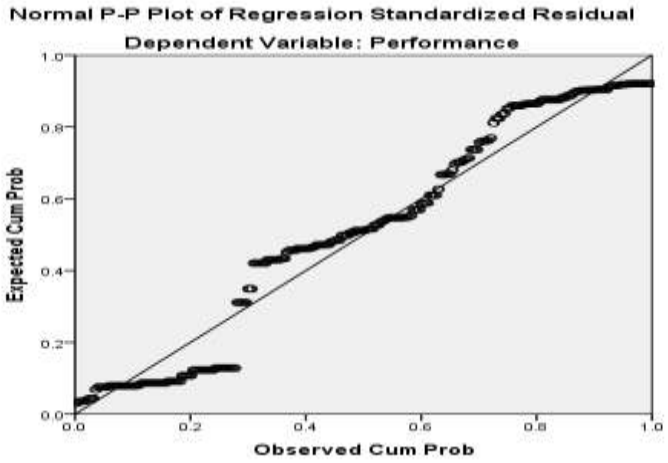


Figure 2: Linearity

4.2.4 Heteroscedasticity

This heteroscedasticity assumption suggests that the data should reflect a trend whereby scores in the data must show high concentration or convergence along 0 axis for standardized residual and predicted value. Accordingly, result in Figure 3 confirmed that the data shape is scatter, as most of the scores showed strong convergence along 0 axis.

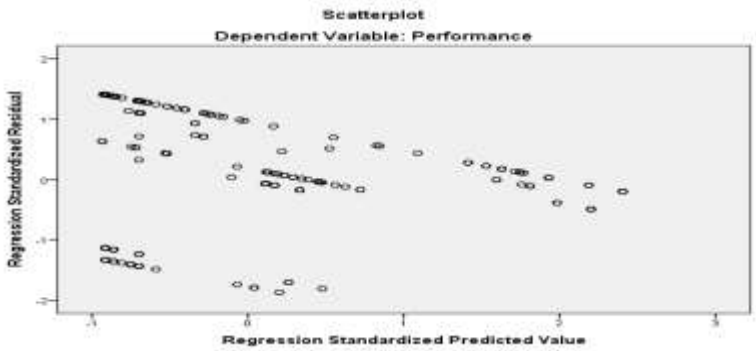


Figure 3: Heteroscedasticity

DOI: https://doi.org/10.5281/zenodo.18073706

5.1 Discussion of Findings

Based on the outcome, the three (3) hypotheses on the direct effect of entrepreneurial mindset on SME performance (H_{01}, H_{02}, and H_{03}) were rejected, as opportunity recognition, risk taking and innovativeness have direct significant effect on SME performance. In the same vein, the four (4) hypotheses on the direct effect of entrepreneurial intention on SME performance, as well as moderating effect of entrepreneurial intention on the relationship between opportunity recognition, risk taking, innovativeness and SME performance (H_{04}, H_{05}, H_{06}, and H_{07}) were rejected. Hence, entrepreneurial intention has a significant effect on SME performance, and as well, entrepreneurial intention has significantly moderated the effect of opportunity recognition, risk taking and innovativeness on SME performance. The summary of findings is shown in Table 9.

Table 9: Decision Table

Hypotheses		Findings	Decision
H1	Opportunity Recognition has no significant effect on SME Performance in Delta State.	Not Supportive	Rejected
H2	Risk-Taking has no significant effect on SME Performance in Delta State.	Not Supportive	Rejected
H3	Innovativeness has no significant effect on SME Performance in Delta State.	Not Supportive	Rejected

The findings implied that propensity to venture into risky activities and predisposition to recognize opportunities, can greatly contribute to better SME performance. Yet, the outcome demonstrated that entrepreneurs who think critically are committed to changes, as they perceive better opportunities and use their mental ability to sustain competitiveness in market place (Herndon, 2021). Suggesting that entrepreneurs can hone creative abilities, transform their thinking ability, and turn capabilities, as well as imaginative concept into new product, to realize organizational benefits (Venkataraman, 2019). In contrast, entrepreneurs who lack ability to brainstorm, generate new ideas and think critically, cannot realize meaningful organizational benefits of their investment. In general, sustainable business growth and performance were motivated by entrepreneurial mindset conceptualized in terms of propensity to risk taking, courage to spot opportunities and ability to satisfy customers through launch of unique product offering (Van Kleef et al., 2021; Hantman & Gimmon, 2014).

Therefore, profitable opportunities are harnessed through predisposition of entrepreneurs to risk taking (Zainol et al., 2018; Wambugu et al., 2015). On the other hand, business failure occurs from risk aversion behavior of entrepreneurs and inability to sight and threats in market environment (Nuvriasari et al., 2020; Rauch et al., 2009). Accordingly, Kalsom and Ab Rahim (2015) and Lumpkin and Dess (1996) established that familiarity of operating environment, willingness to take risks, and invest in identified opportunities, can lead to better performance and organizational success (Moudry & Thaichon, 2020; Nasuredin et al., 2016). Similarly, Yusof and Tahir (2021) and Salaudeen and Sauri (2020) found that business performance is significantly influenced by proclamation of entrepreneur to opportunity identification. Suggesting that entrepreneurs must be ready to seize opportunity, think strategically, and take profitable initiatives, for them to succeed in marketplace (Owoseni et al., 2020; Reuschke & Houston, 2020). Hence, owners/managers of SMEs should explore new business opportunities, be willing take risk and courageous to venture into growth oriented projects (Jain & Khandelwal, 2020).

Accordingly, Mangenda Tshiaba et al. (2021) have similar assertion by claiming that sustainable firm performance, is always attached to spotting of opportunities, which allows entrepreneurs to deliver value, track market demands, position product, and satisfy customers. Hence, firms could fulfil market

DOI: https://doi.org/10.5281/zenodo.18073706

needs by providing unique value, delivering superior offers, integrating resources and innovating new product (Clark & Ramachandran, 2019; Bagheri, 2017). Suggesting that dynamic capabilities arises from or are inclined to opportunity recognition and resolve of entrepreneur to always to deliver values, and respond to market needs, in a desire to foster firm performance and achieve sustainable growth (Mangenda Tshiaba et al., 2021). Hence, entrepreneurial proclivity which symbolizes self-made strategies and resolve to succeed has positive and significant linkage with realization of business objectives and improve organizational performance (Ploum et al., 2018; Hasan & Almubarak, 2016).

Again, the finding is consistent with prior studies who considered innovativeness as driver of sustainable growth (Brännback, 1999; Hurley & Hult, 1988), significant factor for long-term success (Chen et al., 2009; Baum, 1995; Zaltman et al., 1973), and determinant of competitive advantage, and venture performance (Noble et al., 2002; Rauch & Frese, 2000). Additionally, Tajeddini (2010) and Hult et al. (2004) corroborated this assertion by describing innovativeness as process of turning conceived ideas or opportunities, and creativity into new product line, with intention of earning better profit margin. In this line of argument, Van de Ven (1986) and Tsai and Yang (2013) describe innovativeness as growth oriented driven philosophy of an enterprise, demonstrated through search of new ideas and introduction of noble product. Hence, innovativeness is a behavioral component of entrepreneurial mindset, characterized by open mindedness, beliefs, values and courage, to achieve better performance and business growth (Grissemann et al., 2013).

6.1 Conclusion and Recommendations

Based on the research outcome, the study comes up with the following conclusion: Having entrepreneurial mindset is key for SMEs' managers/owners to achieve superior performance. The performance of SMEs is greatly enhanced by the ability of managers to recognize and take advantage of entrepreneurial opportunities. The ability of managers to take calculated risk taking, irrespective of amount of uncertainties can greatly enhance the performance SMEs. Innovativeness in form of unique product offering and development of distinctive competencies is critical for SMEs to achieve superior performance.

Based on the outcome, the study recommended that: Managers should see entrepreneurial mindset as opportunity for them to achieve superior SME performance level, as it encompassed the ability to spot entrepreneurial opportunities in the market environment, take calculate risk and become more innovative in terms of product offering and setting competitive price. Policy makers like SMEDAN can assist managers of SMEs to reshape their entrepreneurial mindset in order to increase competitiveness and performance, by searching for better opportunities, targeting underserved markets and investing more in creativity and innovation.

Future research can investigate the model in a new setting by collecting data from diverse group of respondents, like middle level and top level managers. Further studies can be carried out by modifying the questionnaire and sourcing of more items from entrepreneurial mindset and SME performance literature. Further studies can test the model by focusing specifically on SMEs operating in a particular sector like manufacturing or services, etc.

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