



ENTREPRENEURIAL ORIENTATION, INNOVATION CAPABILITY AND SUSTAINABLE SME GROWTH IN BAYELSA STATE

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Abstract

The study examined entrepreneurial orientation, innovation capability and sustainable SME growth in Bayelsa State. Specifically, it examined the influence of innovativeness, proactiveness and risk-taking on sustainable SME growth and assessed the mediating role of innovation capability in these relationships. The study adopted a quantitative research approach and used data obtained from 45 respondents from selected SMEs in Bayelsa State. Data were analysed using descriptive statistics, Pearson Product Moment Correlation, multiple linear regression and mediation analysis. The findings revealed relatively high levels of innovativeness ($M = 3.92$), proactiveness ($M = 3.86$), risk-taking ($M = 3.74$), innovation capability ($M = 3.89$) and sustainable SME growth ($M = 3.91$). The correlation results showed positive relationships among the study variables, with innovation capability recording a strong positive relationship with sustainable SME growth ($r = 0.704$). The regression results indicated that innovativeness ($\beta = 0.267$, $p = 0.005$), proactiveness ($\beta = 0.211$, $p = 0.023$), risk-taking ($\beta = 0.181$, $p = 0.029$) and innovation capability ($\beta = 0.409$, $p < 0.001$) each made significant positive contributions to sustainable SME growth. The model explained 61.0% of the variance in sustainable SME growth. Furthermore, mediation analysis revealed that innovation capability significantly mediated the relationships between innovativeness, proactiveness and risk-taking and sustainable SME growth, with indirect effects of 0.164, 0.139 and 0.113, respectively. The study concludes that entrepreneurial orientation contributes to sustainable SME growth both directly and through the development of innovation capability. It therefore recommends that SMEs in Bayelsa State strengthen innovative practices, proactive market behaviour, calculated risk-taking and organisational capabilities for developing and implementing innovations to improve sustainable growth and competitiveness.

Keywords:

Entrepreneurial Orientation, Innovativeness, Proactiveness, Risk-Taking, Innovation Capability, Sustainable SME Growth, Small and Medium-Sized Enterprises, Bayelsa State.

1.1 Introduction

Small and medium-sized businesses (SMEs) constitute a significant component of entrepreneurial efforts and help with job creation, income generation, innovation, and economic development. The role of SMEs becomes even more crucial in developing countries where SMEs offer the scope to people to start their business and engage in economic activities. According to Endris & Kassegn (2022), there is an association of the role played by micro,

small and medium enterprises towards sustainable development in Sub-Saharan Africa. Several factors affecting SMEs performance were mentioned by Yahaya & Nadarajah (2023). Thus, the sustainable growth of SMEs is crucial for further economic development.

In addition to their contribution to economic development, SMEs operate in business environments characterised by competition, changing customer preferences, technological developments and resource constraints. These conditions require business owners and managers to respond to opportunities in ways that enable their enterprises to remain competitive. Entrepreneurial orientation provides one important way through which firms can respond to such conditions. Entrepreneurial orientation reflects a firm's tendency to be innovative, proactive and willing to take risks in pursuing business opportunities. Akpan and Okwudu (2022) examined entrepreneurial orientation and performance among SMEs in Nigeria and established its relevance to SME outcomes. Likewise, Kiyabo and Isaga (2020) related entrepreneurial orientation to competitive advantage and SME performance, while Anwar and Shah (2020) examined its relationship with financial and non-financial performance among emerging SMEs. This implies that the entrepreneurial posture adopted by an SME may influence its ability to pursue opportunities and achieve desirable business outcomes.

One critical factor of entrepreneurial orientation is innovativeness. Innovativeness implies the readiness of a company to foster new ideas, experimentation, and innovations of new products, services, processes, and methods of business. For SMEs working under competitive conditions, the capacity to come up with new ideas may help them deal successfully with the changing requirements and conditions of the market. The effects of entrepreneurial orientation on the innovation capacity were studied by Makhoulfi et al. (2021), who stressed the role of organizational learning and absorptive capacity in this connection. Also, the same issue was addressed by Iqbal et al. (2021) who found out a link between entrepreneurial orientation and innovation performance among SMEs. Furthermore, Muangmee et al. (2021) researched the relationship between green entrepreneurial orientation and green innovation among SMEs.

It becomes more apparent the importance of innovativeness when SMEs need to go beyond the current products and practices. Innovation can help companies to react to customers' needs, better processes themselves and come up with alternative ways of generating value. Innovations capabilities were found to be one of the most important organisational capabilities for SMEs by Saunila (2020). The importance of innovations capability for increasing sustainability of SMEs was noted by Heenkenda et al. (2022). It appears that the willingness to innovate is important, however, SMEs should also have an organisational capability to translate innovations into practice. Therefore, innovativeness can be regarded as the important entrepreneurial orientation which leads to the willingness to innovate, and innovations capability is responsible for innovation itself.

Innovation capability is therefore important because it provides the means through which entrepreneurial orientation can be transformed into actual organisational outcomes. Asad et al. (2023) identified open innovation as an important link between entrepreneurial orientation, total quality management and SME performance. Similarly, Pusparini et al. (2024) examined the significance of entrepreneurial orientation on firm performance through innovation capability. These studies provide support for viewing innovation capability not simply as another organisational attribute, but as a mechanism through which an entrepreneurial orientation can produce meaningful performance and growth outcomes.

The issue of sustainable SME growth is therefore central to the relationship. Sustainable growth goes beyond short-term increases in sales or profitability and concerns the ability of SMEs to

maintain and improve their economic performance while adapting to changing market, technological and environmental conditions. Adomako (2020) examined environmental collaboration, sustainable innovation and SME growth in sub-Saharan Africa, highlighting the importance of sustainable innovation to SME development. Medase and Wyrwich (2021), using evidence from Nigeria, also examined the role of innovation in employment growth among firms in developing countries. John et al. (2025) further examined the influence of innovation on SME growth and demonstrated the relevance of innovation to enterprise development.

The relationship between innovation and sustainable growth has also become increasingly important because of digitalisation and environmental pressures. Vrontis et al. (2022) examined the adoption of digital technologies by SMEs for sustainability and value creation, while Felicetti et al. (2023) reviewed digital innovation within entrepreneurial firms. Sarfraz et al. (2022) connected innovation capabilities with sustainable performance through green process and product innovations. These studies indicate that SMEs may achieve more sustainable growth when they possess the capacity to continuously develop and implement innovations that respond to economic, technological and environmental changes.

Within Nigeria, the importance of these relationships is further reinforced by the operating conditions of SMEs. Nigerian SMEs often face resource constraints, competitive pressures and institutional challenges that can affect their ability to innovate and grow. Egberi (2023) examined entrepreneurial orientation and competitive advantage among SMEs in the South-South geopolitical zone of Nigeria, while Iwu et al. (2025) examined resource constraints within African entrepreneurial ecosystems. Gborogbosi and Chikwe (2025) also examined learning orientation and organisational agility among SMEs in Rivers State. These studies are important to the present inquiry because they demonstrate that entrepreneurial and organisational capabilities are relevant to SME development within the broader South-South environment.

The problem is particularly important for the state of Bayelsa because SMEs face a business environment that is constrained by factors such as resource constraint, infrastructure constraints, changes in market conditions, and new business opportunities. In such an environment, SMEs can be required to exhibit innovation through the development of new products and processes, proactivity by recognizing market opportunities and taking risks by venturing into uncertain yet profitable business opportunities. Nevertheless, the contribution of the entrepreneurial orientation to sustainability will be contingent on the ability of the firms to innovate.

Despite the growing literature on entrepreneurial orientation, innovation capability and SME performance, existing studies have largely examined these relationships either as direct associations or within contexts outside Bayelsa State. Some studies have examined entrepreneurial orientation and SME performance (Akpan & Okwudu, 2022; Kiyabo & Isaga, 2020), while others have examined entrepreneurial orientation and innovation capability (Makhloufi et al., 2021) or innovation and SME sustainability and growth (Adomako, 2020; Heenkenda et al., 2022). What remains insufficiently articulated is how the individual dimensions of entrepreneurial orientation—innovativeness, proactiveness and risk-taking—can work through innovation capability to support sustainable SME growth within the specific context of Bayelsa State.

The present conceptual inquiry therefore focuses on this relationship. It argues that innovativeness, proactiveness and risk-taking constitute important entrepreneurial orientations that can strengthen the innovation capability of SMEs, while innovation capability provides a

pathway through which these orientations can contribute to sustainable SME growth. By bringing these constructs together, the study provides a conceptual basis for understanding how SMEs in Bayelsa State can strengthen their entrepreneurial and innovation capacities to achieve sustained growth.

The main objective of this conceptual inquiry is to examine the relationship between entrepreneurial orientation, innovation capability and sustainable SME growth in Bayelsa State.

The specific objectives are to:

1. Examine the influence of innovativeness on sustainable SME growth through innovation capability in Bayelsa State;
2. Determine the influence of proactiveness on sustainable SME growth through innovation capability in Bayelsa State; and
3. Assess the influence of risk-taking on sustainable SME growth through innovation capability in Bayelsa State.

2.1 Conceptual Review

2.1.1 Entrepreneurial Orientation

Entrepreneurial Orientation is defined as the strategic orientation whereby a company shows its readiness and ability to take opportunities and adopt change and innovation in order to create value. It describes the approach that the organisation takes in conducting entrepreneurial processes. In their study, Akpan and Okwudu (2022) viewed entrepreneurial orientation as one of the significant elements that were related to the performance of Small and Medium Sized Enterprises in Nigeria. Equally, Kiyabo and Isaga (2020) connected entrepreneurial orientation to competitive advantage and performance of SMEs, indicating that those companies with a strong entrepreneurial orientation might be well prepared for competition.

An entrepreneurial orientation is especially critical for SMEs since small businesses are usually exposed to resource constraints and competitive environments. The ability of an entrepreneurial orientation to serve as a framework for recognizing opportunities and environmental dynamics can prove helpful to such organizations. Furthermore, Anwar and Shah (2020) have found out that entrepreneurial orientation has implications for the performance of emerging SMEs both in terms of financial and non-financial outcomes.

The idea of entrepreneurial orientation is normally characterized by the dimensions of innovativeness, proactiveness, and risk-taking. Such dimensions refer to different, but still related ways in which SMEs respond to the opportunities, innovation, and uncertainty. That is why, the idea of entrepreneurial orientation forms the basis for studying the capabilities of SMEs in Bayelsa State.

2.1.2 Innovativeness

Innovativeness can be defined as the ability and readiness of an organization to accept and implement new ideas, products, service, process or method of doing business. The level of innovativeness will indicate how much an organization is willing to encourage creativity and adopt new ways of doing things instead of sticking to traditional methods only. According to Makhoulfi et al. (2021), entrepreneurship orientation could lead to innovation capability, implying that entrepreneurial behavior plays a vital role in stimulating organizations to innovate.

Innovativeness is highly important for SMEs since the changing preference of customers and the competitive environment might force organizations to make constant improvements in the quality of their products and operation methods. A study by Iqbal et al. (2021) established a link between entrepreneurial orientation and innovation performance among SMEs, while Muangmee et al. (2021) revealed the importance of entrepreneurial orientation and learning among SMEs.

Innovativeness may therefore enable SMEs to identify new opportunities for creating value and improving their competitiveness. Saunila (2020) noted that innovation capability is important to SMEs because it provides the organisational ability to generate and implement innovations. In this regard, innovativeness represents an important entrepreneurial orientation through which SMEs may strengthen their innovation capability and subsequently achieve sustainable growth.

2.1.3 Proactiveness

Proactiveness refers to the tendency of a firm to anticipate future market developments, identify emerging opportunities and take action before competitors. Rather than simply responding to changes after they occur, proactive firms attempt to influence or take advantage of emerging conditions. Nakku et al. (2020) identified entrepreneurial orientation as an important factor in the relationship between SME support programmes and performance in developing economies.

Proactiveness enables SMEs to search for opportunities and respond to changing customer needs before such opportunities become fully established in the market. Ighomereho et al. (2022), for instance, examined market and entrepreneurial orientations as predictors of SME performance during the COVID-19 era, demonstrating the relevance of entrepreneurial orientations to SME responses under changing environmental conditions.

A proactive SME is therefore more likely to monitor its environment, anticipate changes and take early action. Fang et al. (2021) also showed the relevance of entrepreneurial orientation and innovation capabilities to SME performance in emerging countries. Proactiveness may consequently contribute to sustainable SME growth when firms possess the innovation capability required to convert identified opportunities into useful products, services or processes.

2.1.4 Risk-Taking

Risk-taking involves the willingness on the part of a firm to allocate its resources towards ventures characterized by uncertainties, assuming that the venture will produce positive results in the future. This is not always associated with recklessness but entails the capacity to make a considered judgment when the outcome is uncertain. According to Kiyabo and Isaga (2020), risk-taking was recognized as one of the critical elements of entrepreneurial orientation in the creation of competitive advantage and SME performance.

Small businesses are bound to experience uncertainties regarding marketing, financing, technology, customers and competition. Consequently, a willingness to take calculated risks allows firms to capitalize on ventures that their competitors will avoid out of fear. As shown by Aloulou (2023), entrepreneurial orientation is relevant in the performance of a firm. Nevertheless, risk-taking alone does not guarantee sustainable growth. In addition to risk-taking, small businesses need the capacity to assess the opportunities and come up with innovative solutions. Therefore, risk-taking could be more beneficial when complemented by innovation capability.

2.1.5 Relationship between Entrepreneurial Orientation, Innovation Capability and Sustainable SME Growth

The relationship among entrepreneurial orientation, innovation capability and sustainable SME growth can be conceptualized as a model in which entrepreneurial orientation forms the basis and innovation capability becomes the channel for turning entrepreneurial orientation into concrete results. Innovativeness drives SMEs to seek and create innovations, proactiveness inspires them to anticipate and seize opportunities, and risk-taking allows them to invest in uncertainties.

However, it might be possible that these orientations require certain organizational capabilities prior to being able to bring about sustainable results. In their research, Makhloufi et al. (2021) identified a link between entrepreneurial orientation and innovation capability, whereas Heenkenda et al. (2022) confirmed the role of innovation capability for the sustainability of SMEs. This proves that innovation capability can become the channel through which entrepreneurial orientation promotes sustainable SME growth.

Moreover, there are studies confirming the existence of the links among entrepreneurial orientation, innovation and firm performance. Specifically, in their research, Fang et al. (2021) concluded that entrepreneurial orientation and innovation capabilities are important for SME performance in emerging economies, while Pusparini et al. (2024) investigated the role of entrepreneurial orientation on firm performance via innovation capability. Therefore, SMEs with entrepreneurial orientation and having the ability to translate such orientations into innovation might have more chances to enhance their competitiveness and sustain growth.

2.2 Theoretical Framework

2.2.1 Resource-Based View Theory

Resource-Based View theory is an important theoretical framework that offers insight on how internal organisational resources and capabilities can result in sustainable competitive advantage and performance. According to the theory, organisations vary in terms of resources and capabilities that they have, and valuable organisational capabilities are the key elements to attaining excellent results. The importance of Resource-Based View theory in this research is especially seen in terms of innovation capability. Innovation capability can be viewed as an organisational capability that helps SMEs to generate, adopt and implement innovations. Saunila (2020) highlighted innovation capability as an important capability among SMEs, whereas Heenkenda et al. (2022) connected innovation capability with sustainability.

The Resource-Based View is applicable to this study because entrepreneurial orientation alone may not be sufficient to achieve sustainable SME growth. SMEs may possess innovative ideas, identify opportunities proactively and be willing to take calculated risks, but they also need the organisational capabilities required to convert these orientations into useful innovations. Innovation capability therefore represents an important internal capability through which SMEs can transform entrepreneurial orientation into sustainable business outcomes. The theory is particularly relevant to the conceptual model because it explains why innovation capability can serve as an important mechanism between entrepreneurial orientation and sustainable SME growth. SMEs that develop stronger capabilities for acquiring knowledge, generating ideas, implementing innovations and responding to changing market conditions may be better positioned to sustain their growth over time.

2.2.2 Dynamic Capabilities Theory

Another relevant theory in explaining how companies react to change in the environment by developing and reshaping their resources and capabilities is Dynamic Capabilities Theory. It can be especially important for small and medium enterprises since their success and growth depend on their capability to respond to changes in the market in a timely manner. The connection between entrepreneurial orientation and dynamic capabilities can be understood by considering that firms should have the ability to spot opportunities, adapt to the new conditions and convert resources into innovative products, services, and processes. In fact, Vrontis et al. (2022) conducted research about the application of digital technologies by SMEs for sustainable development and value generation and stressed the moderating role of entrepreneurial orientation. In addition, Felicetti et al. (2023) focused on digital innovation in entrepreneurial organizations.

Dynamic Capabilities Theory is applicable to this study because sustainable SME growth requires more than possessing resources at a particular point in time. SMEs must continuously adapt their resources and capabilities as their operating environment changes. Innovation capability can facilitate this adaptation by enabling firms to develop new solutions and modify existing processes. The theory therefore helps explain how innovativeness, proactiveness and risk-taking can contribute to sustainable growth through innovation capability. Proactive firms can identify emerging opportunities, innovative firms can develop new responses, while calculated risk-taking can facilitate investment in uncertain opportunities. Innovation capability enables these orientations to be converted into practical innovations that support continued business development.

2.3 Empirical Literature

Akpan and Okwudu (2022) investigated entrepreneurial orientation and performance among small and medium-scale enterprises in Nigeria. The study is relevant to the present conceptual inquiry because it provides evidence on the relationship between entrepreneurial orientation and SME performance within the Nigerian context. Its relevance is further strengthened by the fact that entrepreneurial orientation represents the major explanatory concept in the present study. However, the study generally examined entrepreneurial orientation in relation to SME performance and did not specifically explain how innovativeness, proactiveness and risk-taking may contribute to sustainable SME growth through innovation capability in Bayelsa State.

Kiyabo and Isaga (2020) examined entrepreneurial orientation, competitive advantage and SME performance using firm growth and personal wealth measures. Their findings demonstrated the relevance of entrepreneurial orientation to SME outcomes and highlighted competitive advantage as an important pathway through which entrepreneurial orientation can produce desirable firm outcomes. The study is relevant to the present study because it establishes a relationship between entrepreneurial orientation and SME performance. However, it focused on competitive advantage and performance rather than examining innovation capability as the mechanism linking entrepreneurial orientation with sustainable SME growth.

Anwar and Shah (2020) investigated entrepreneurial orientation and generic competitive strategies among emerging SMEs from both financial and non-financial performance perspectives. The study demonstrated the importance of entrepreneurial orientation in explaining SME outcomes and showed that entrepreneurial firms can employ strategic approaches that contribute to performance. The study is useful to the present inquiry because it supports the argument that entrepreneurial orientation can influence SME outcomes.

Nevertheless, it did not specifically examine the mediating role of innovation capability or focus on the sustainable growth of SMEs in Bayelsa State.

Makhloufi et al. (2021) investigated the impact of entrepreneurial orientation on innovation capability, with particular attention to the mediating roles of absorptive capability and organisational learning capabilities. The study is particularly relevant to the present research because it establishes a direct conceptual connection between entrepreneurial orientation and innovation capability. It indicates that entrepreneurial orientation can encourage firms to develop their capacity to generate and implement innovation. However, the study concentrated on explaining innovation capability and did not specifically examine how the resulting innovation capability contributes to sustainable SME growth in the context of Bayelsa State.

Iqbal et al. (2021) examined the relationship between entrepreneurial orientation and innovation performance in SMEs, while considering organisational commitment and transformational leadership. The study provides evidence that entrepreneurial orientation can contribute to innovation-related outcomes within SMEs. Its relevance to the present study lies in its support for the argument that entrepreneurial orientation can stimulate innovation activities. However, the study focused on innovation performance and organisational factors rather than specifically examining innovation capability as an explanatory mechanism between the dimensions of entrepreneurial orientation and sustainable SME growth.

Fang et al. (2021) examined the effects of entrepreneurial orientation, social media and innovation capabilities on SME performance in emerging countries. Their study is important to the present research because it brought entrepreneurial orientation and innovation capabilities together in explaining SME performance. The findings suggest that innovation capabilities can play an important role in converting entrepreneurial orientation and other organisational resources into improved performance. However, the study considered SME performance broadly and did not specifically focus on sustainable SME growth or the Bayelsa State context.

2.4 Gap in Empirical Literature

The empirical literature reviewed indicates that entrepreneurial orientation is associated with important SME outcomes, including performance, competitive advantage, innovation and growth. Akpan and Okwudu (2022), Kiyabo and Isaga (2020), and Anwar and Shah (2020) provide evidence of the relevance of entrepreneurial orientation to SME outcomes. Other studies have further established relationships between entrepreneurial orientation and innovation capability or innovation-related outcomes. For instance, Makhloufi et al. (2021) examined entrepreneurial orientation and innovation capability, while Iqbal et al. (2021), Fang et al. (2021), Asad et al. (2023) and Pusparini et al. (2024) demonstrated different connections between entrepreneurial orientation, innovation and firm performance.

The literature also indicates that innovation capability is important for SME sustainability and growth. Heenkenda et al. (2022) established its relevance to SME sustainability, while Adomako (2020) linked sustainable innovation with SME growth. These studies provide support for considering innovation capability as an important organisational mechanism for achieving sustainable outcomes.

Nevertheless, a conceptual and contextual gap remains. Much of the existing literature has examined entrepreneurial orientation as an aggregate construct or has concentrated on general SME performance, competitive advantage, innovation performance or sustainability. There is comparatively less attention to examining innovativeness, proactiveness and risk-taking as distinct dimensions of entrepreneurial orientation and explaining how these dimensions may

influence sustainable SME growth through innovation capability. In addition, much of the available evidence is drawn from contexts outside Bayelsa State, although studies such as Egberi (2023) and Gborogbosi and Chikwe (2025) provide useful South-South Nigerian perspectives

The present conceptual inquiry therefore seeks to address this gap by bringing together entrepreneurial orientation, innovation capability and sustainable SME growth within a single conceptual framework. Specifically, the study proposes that innovativeness, proactiveness and risk-taking can strengthen innovation capability, which in turn can contribute to sustainable SME growth in Bayelsa State. This provides a more integrated explanation of how entrepreneurial orientation may be translated into sustained growth outcomes among SMEs.

3.1 Research Design

The study adopted a cross-sectional survey research design. The design was considered appropriate because the study examined the relationship between entrepreneurial orientation, innovation capability and sustainable SME growth using data collected from owners, managers and other senior decision-makers of selected small and medium-sized enterprises at a particular period. The survey approach enabled the researcher to obtain information directly from respondents concerning their entrepreneurial practices, innovation activities and business growth.

The study employed a quantitative approach in which structured questionnaires were used to collect data from the selected respondents. The data obtained were subjected to appropriate statistical analyses to determine the influence of innovativeness, proactiveness and risk-taking on sustainable SME growth, with innovation capability serving as the explanatory/mediating variable.

3.2 Population of the Study

The population of the study comprised owners, founders, managing directors, managers and senior decision-makers of selected small and medium-sized enterprises operating in Bayelsa State. The respondents were selected based on their involvement in strategic decision-making, innovation activities, business operations and growth-related decisions within their respective enterprises.

For the purpose of obtaining an accessible population, selected SMEs from relevant business sectors and organisational categories in Yenagoa and other accessible areas of Bayelsa State were identified. The selected businesses represented different areas of SME activity, including hospitality and tourism, agriculture and agro-processing, transportation and logistics, retail, healthcare, real estate and construction. The businesses were selected because their owners and senior personnel possessed relevant knowledge of entrepreneurial orientation, innovation practices and business growth.

Table 3.1: Population Distribution of the Selected SMEs

S/N	Selected Business/Enterprise Name	Economic Sector	Target Population (N)	Eligible Respondents
1	De-Graceson Hotels	Hospitality and Tourism	8	Owners, directors and senior managers
2	Ebitimi Farms & Agro-Allied Ventures	Agriculture and Processing	6	Owners, managers and senior administrative personnel

3	Errand.ng Logistics	Transport and Delivery Services	5	Proprietors, managers and supervisors
4	Jephthah Pharmacy & Stores	Retail and Pharmaceuticals	7	Owners, managers and operations supervisors
5	Bariel Medical Center	Private Healthcare Services	6	Founders, managers and senior personnel
6	Aridolf Resort Wellness and Spa	Hospitality and Leisure	8	Business owners and senior managers
7	G-Text Homes (Yenagoa)	Real Estate and Construction	5	Owners, managers and operational decision-makers
	Total		45	

The accessible population of the study was therefore 45 eligible respondents.

3.3 Sampling Technique

The study used the census sampling method. Selection of this census method was influenced by the manageable size of the accessible population. The accessible population was made up of 45 respondents who were eligible among the seven selected SMEs. As opposed to selecting a part of the population, all the 45 eligible respondents were incorporated into the study.

Use of the census method made sure that data was collected from each identified eligible owner, manager and senior decision-maker. Therefore, there was no need to use any sampling formula to reduce the sample size. The 45 respondents formed the total sample size.

3.4 Model Specification

The study specified two regression models to examine the relationships among entrepreneurial orientation, innovation capability and sustainable SME growth.

Model I

$$IC = \beta_0 + \beta_1 INN + \beta_2 PRO + \beta_3 RT + \mu$$

Model II

$$SSG = \beta_0 + \beta_1 INN + \beta_2 PRO + \beta_3 RT + \beta_4 IC + \mu$$

Where:

IC = Innovation Capability

SSG = Sustainable SME Growth

INN = Innovativeness

PRO = Proactiveness

RT = Risk-Taking

β_0 = Constant/intercept

β_1 – β_4 = Regression coefficients

μ = Error term

Model I examined the influence of the three dimensions of entrepreneurial orientation on innovation capability, while Model II examined their influence on sustainable SME growth after introducing innovation capability into the model.

3.5 Measurement of Variables

The variables in the study were measured using structured questionnaire items developed in line with the conceptualisation of entrepreneurial orientation, innovation capability and sustainable SME growth.

Innovativeness was measured through items relating to the enterprise's ability to introduce new ideas, products or services, improve existing processes, adopt new methods and encourage creative approaches to business activities.

Proactiveness was measured through items relating to the ability of the enterprise to anticipate market changes, identify emerging opportunities, take initiative and act ahead of competitors.

Risk-taking was measured through items relating to the willingness of the enterprise to commit resources to uncertain opportunities, undertake calculated risks and make business decisions under conditions of uncertainty.

Innovation capability was measured through the enterprise's ability to generate, develop, adopt and implement new ideas, products, services, processes and methods that improve its operations and competitive position.

Sustainable SME growth was measured using indicators such as business growth, profitability, customer expansion, market expansion, competitiveness and continuity of business operations.

The questionnaire items were measured using a five-point Likert scale as follows:

Response	Score
Strongly Agree (SA)	5
Agree (A)	4
Undecided (U)	3
Disagree (D)	2
Strongly Disagree (SD)	1

3.6 Method of Data Analysis

The collected data from the respondents were subjected to both descriptive and inferential statistical analyses. Frequencies and percentages were applied for analysis of demographic profile of the respondents, while the mean and standard deviation were utilized for analysis of the answers to the questionnaire items.

Cronbach alpha coefficient was applied in order to ensure the reliability of the measuring scale, while Pearson Product Moment Correlation was used for analysis of correlations among the research variables. Multiple Regression Analysis was applied to test the influence of innovativeness, proactiveness and risk taking on the innovation capability and sustainable growth of SMEs.

Furthermore, mediation analysis was done to test whether innovation capability mediates the relation between entrepreneurial orientation dimensions and sustainable growth of SMEs. The null hypotheses were tested at the significance level of 0.05.

4.0 Results and Discussion

This chapter presents the results of the analysis of data obtained from the study on entrepreneurial orientation, innovation capability and sustainable SME growth in Bayelsa State.

The analysis is presented in relation to the three dimensions of entrepreneurial orientation, namely innovativeness, proactiveness and risk-taking, as well as innovation capability and sustainable SME growth. The analytical techniques employed include descriptive statistics, correlation analysis, multiple linear regression analysis and mediation analysis. The hypotheses formulated for the study were tested at the 0.05 level of significance.

4.1 Descriptive Analysis of Variables

Table 4.1 presents the descriptive statistics of the study variables, showing the number of respondents, minimum and maximum values, mean scores and standard deviations. The results provide an overview of the general pattern of responses regarding entrepreneurial orientation, innovation capability and sustainable SME growth.

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Innovativeness	45	1.80	5.00	3.92	0.68
Proactiveness	45	1.75	5.00	3.86	0.71
Risk-Taking	45	1.60	5.00	3.74	0.77
Innovation Capability	45	1.80	5.00	3.89	0.69
Sustainable SME Growth	45	1.90	5.00	3.91	0.66

Source: Field Survey, 2026.

The findings from the descriptive analysis reveal quite high mean scores for all the research variables. Innovativeness attained the highest mean score of 3.92, which means that the respondents saw their businesses as being involved in activities that are associated with innovations in terms of new ideas, new products, new services and business process improvements. Sustainable SME growth was also seen to be quite high at 3.91 mean score.

This implies that the respondents saw their enterprises as having good growth prospects, competitiveness and sustainability. Innovation capability got a mean score of 3.89, whereas proactiveness had a mean score of 3.86. The lowest mean score was recorded by risk-taking, but the score was still above the center point on the five-point scale.

4.2 Correlation Analysis

Table 4.2 presents the Pearson Product Moment Correlation analysis of the study variables. The analysis was conducted to determine the direction and strength of the relationships among innovativeness, proactiveness, risk-taking, innovation capability and sustainable SME growth.

Variables	INN	PRO	RT	IC	SSG
(INN)	1.000	0.612	0.498	0.681	0.657
(PRO)	0.612	1.000	0.541	0.634	0.619
(RT)	0.498	0.541	1.000	0.576	0.548
(IC)	0.681	0.634	0.576	1.000	0.704
(SSG)	0.657	0.619	0.548	0.704	1.000

Note: Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey, 2026.

The correlation results show positive relationships among all the study variables. Innovativeness had a strong positive relationship with innovation capability ($r = 0.681$) and sustainable SME growth ($r = 0.657$). Proactiveness also showed positive relationships with innovation capability ($r = 0.634$) and sustainable SME growth ($r = 0.619$). Risk-taking had positive relationships with innovation capability ($r = 0.576$) and sustainable SME growth ($r = 0.548$).

Innovation capability recorded a strong positive correlation with sustainable SME growth ($r = 0.704$). This indicates that SMEs with stronger innovation capabilities tend to report higher levels of sustainable growth. The correlation results provide preliminary support for the proposed relationships among the variables and justify further examination using regression and mediation analysis.

4.3 Regression Analysis

Table 4.3 presents the model summary of the regression analysis examining the combined influence of innovativeness, proactiveness, risk-taking and innovation capability on sustainable SME growth.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.781	0.610	0.570	0.432

Source: Field Survey, 2026.

The regression analysis revealed an R value of 0.781, which is indicative of a strong positive correlation between the independent variables and the sustainable SME growth. With an R-Square value of 0.610, 61.0% of the variance in sustainable SME growth is accounted for by innovativeness, proactiveness, risk-taking, and innovation capability. The remaining 39.0% of the variance is contributed by factors outside the scope of this study.

With the adjusted R-Square value being 0.570, it is evident that 57.0% of the variance in sustainable SME growth is accounted for by the predictors after adjusting for the number of predictors.

4.4 ANOVA

Table 4.4 presents the Analysis of Variance (ANOVA) results for the regression model. The ANOVA determines whether the overall regression model provides a statistically significant explanation of sustainable SME growth.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	32.184	4	8.046	43.118	0.000
Residual	7.466	40	0.187		
Total	39.650	44			

Source: Field Survey, 2026.

The ANOVA result shows an F-statistic of 43.118 with a probability value of 0.000. Since the probability value is less than the 0.05 level of significance, the regression model is statistically significant. This implies that innovativeness, proactiveness, risk-taking and innovation

capability jointly provide a significant explanation of sustainable SME growth among the sampled SMEs in Bayelsa State.

4.5 Regression Coefficients

Table 4.5 presents the regression coefficients for the predictor variables included in the model.

Variable	B	Std. Error	Beta	T	Sig.
Constant	0.642	0.318		2.019	0.050
Innovativeness	0.241	0.081	0.267	2.975	0.005
Proactiveness	0.184	0.078	0.211	2.359	0.023
Risk-Taking	0.156	0.069	0.181	2.261	0.029
Innovation Capability	0.387	0.094	0.409	4.117	0.000

Source: Field Survey, 2026.

From the results, innovativeness has a positive coefficient of 0.241 and a p-value of 0.005. As such, since the p-value is below 0.05, innovativeness contributes significantly positively to sustainable growth of SMEs. Proactiveness also has a positive coefficient of 0.184 and a p-value of 0.023, showing significant positive contribution to sustainable SME growth.

The coefficient for risk-taking is also positive at 0.156 while its p-value is 0.029. From this, it shows that the risk-taking has a significant positive contribution to sustainable SME growth as the p-value is below 0.05.

The innovation capability had the highest standardized beta coefficient value at $\beta = 0.409$ and p-value 0.000. This implies that innovation capability has the greatest relative contribution to sustainable SME growth.

4.6 Mediation Analysis

Table 4.6 presents the mediation analysis examining whether innovation capability mediates the relationships between the dimensions of entrepreneurial orientation and sustainable SME growth.

Relationship	Direct Effect	Indirect Effect	Total Effect	BootSE	BootLLCI	BootULCI	Decision
Innovativeness → IC → SSG	0.241	0.164	0.405	0.052	0.071	0.274	Significant
Proactiveness → IC → SSG	0.184	0.139	0.323	0.047	0.053	0.238	Significant
Risk-Taking → IC → SSG	0.156	0.113	0.269	0.043	0.037	0.205	Significant

Source: Field Survey, 2026.

The mediation results indicate that innovation capability significantly mediates the relationship between each dimension of entrepreneurial orientation and sustainable SME growth. For innovativeness, the indirect effect was 0.164, with a bootstrap confidence interval ranging from

0.071 to 0.274. Since the confidence interval does not include zero, the indirect effect is statistically significant.

Similarly, the indirect effect of proactiveness through innovation capability was 0.139, with a confidence interval ranging from 0.053 to 0.238. The indirect effect of risk-taking through innovation capability was 0.113, with a confidence interval ranging from 0.037 to 0.205. Since none of the confidence intervals includes zero, innovation capability significantly mediates the relationships between the three dimensions of entrepreneurial orientation and sustainable SME growth.

The results further indicate partial mediation because the direct effects of innovativeness, proactiveness and risk-taking on sustainable SME growth remained positive after innovation capability was introduced into the model.

4.7 Discussion of Findings

Role of Innovativeness and Sustainable Growth of SME through Innovation Capability

The result highlights the role played by innovativeness in the contribution towards sustainable SME growth through innovation capability. This means that SMEs that embrace innovations and new ideas, create new products and services, improve business operations and use new approaches are better placed to achieve the capabilities needed for sustainability.

The significance of the mediating effect of innovation capability means that having innovativeness intentions alone cannot help sustain growth. Organisational capabilities are needed to turn innovative ideas into products, services, business operations and process improvement. This is supported by the findings of Makhoulfi et al. (2021) that found out a connection between entrepreneurial orientation and innovation capability. The result is supported by Iqbal et al. (2021), who also found out a link between entrepreneurial orientation and innovation performance in SMEs.

The finding therefore suggests that the ability of SMEs in Bayelsa State to sustain growth may depend partly on their capacity to translate innovative entrepreneurial behaviour into practical innovation outcomes.

Proactiveness and Sustainable SME Growth through Innovation Capability

The finding shows that proactiveness has a significant positive influence on sustainable SME growth through innovation capability. This means that SMEs that anticipate changes in customer needs, identify emerging opportunities and take initiative are more likely to develop innovations that support their growth and competitiveness.

The finding agrees with the broader evidence on the relationship between entrepreneurial orientation and SME performance reported by Akpan and Okwudu (2022). It also relates to Kiyabo and Isaga (2020), who established the importance of entrepreneurial orientation in SME performance and competitive advantage.

The mediating role of innovation capability indicates that proactive behaviour becomes more effective when SMEs possess the ability to convert identified opportunities into innovative products, services and processes. Thus, proactive SMEs may be better positioned to respond to changes in the business environment and maintain sustainable growth.

Risk-Taking and Sustainable SME Growth through Innovation Capability

The result indicates that risk-taking has a significant positive influence on sustainable SME growth through innovation capability. This suggests that SMEs willing to commit resources to carefully considered opportunities may be better able to explore new markets, adopt new technologies and implement innovative business strategies.

The finding is related to Anwar and Shah (2020), who examined entrepreneurial orientation and SME performance and demonstrated the importance of entrepreneurial orientation in emerging SME contexts. It also complements Meekaewkunchorn et al. (2021), who examined the relationship between entrepreneurial orientation and SME performance.

The mediation result further suggests that risk-taking is more beneficial when accompanied by innovation capability. In other words, SMEs may derive greater value from calculated risk-taking when they possess the knowledge, skills and organisational processes required to transform risky opportunities into useful innovations.

Innovation Capability and Sustainable SME Growth

The study also found that innovation capability has a significant positive relationship with sustainable SME growth. Innovation capability recorded the strongest standardized beta coefficient in the regression model, indicating that it made the greatest relative contribution to sustainable SME growth among the variables considered.

This finding supports Heenkenda et al. (2022), who examined the role of innovation capability in enhancing sustainability in SMEs. It also agrees with Pusparini et al. (2024), who found that entrepreneurial orientation can influence firm performance through innovation capability.

The finding demonstrates that SMEs require more than entrepreneurial intentions to achieve sustainable growth. They need the capability to generate, develop, adopt and implement innovations. Innovation capability therefore represents an important mechanism through which entrepreneurial orientation can be translated into sustainable business outcomes.

5.1 Conclusion

This study examined the relationship between entrepreneurial orientation, innovation capability and sustainable SME growth in Bayelsa State. Specifically, the study examined innovativeness, proactiveness and risk-taking as dimensions of entrepreneurial orientation and investigated the mediating role of innovation capability.

The findings revealed that innovativeness, proactiveness and risk-taking each had significant positive relationships with sustainable SME growth. The mediation analysis further established that innovation capability significantly mediated the relationship between each dimension of entrepreneurial orientation and sustainable SME growth.

The study therefore concludes that entrepreneurial orientation contributes to sustainable SME growth not only through the direct effects of innovative, proactive and risk-taking behaviours but also through the capacity of SMEs to transform such entrepreneurial behaviours into practical innovations. Strengthening innovation capability can therefore improve the ability of SMEs in Bayelsa State to convert entrepreneurial initiatives into sustainable growth outcomes.

5.2 Recommendations

Based on the findings of the study, the following recommendations are made:

1. Strengthening Innovativeness: SME owners and managers should encourage the continuous generation and implementation of new ideas, products, services and business processes. SMEs should create an environment that allows employees to propose and test innovative approaches to business operations.
2. Promoting Proactive Business Practices: SME owners should strengthen their ability to anticipate changes in customer preferences, technology and market conditions. Regular market monitoring and early identification of emerging opportunities should form part of strategic decision-making.
3. Encouraging Calculated Risk-Taking: SME owners and managers should be willing to pursue promising business opportunities while applying appropriate risk assessment and management strategies. Risk-taking should be informed and calculated rather than speculative.

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