

Green Entrepreneurship Practices and the Sustainability of Small and Medium-Sized Enterprises in Akwa Ibom State, Nigeria

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Abstract

This study examined the effect of green entrepreneurship practices on the sustainability of Small and Medium-Sized Enterprises (SMEs) in Akwa Ibom State, Nigeria. A descriptive cross-sectional survey research design was adopted, with data collected from 356 respondents using a structured questionnaire, achieving a 91.9% response rate. Descriptive and regression analyses were employed. Findings revealed a high level of adoption of green practices, with strong commitments to renewable energy (79.5%), financial resource allocation for environmental upgrades (77.8%), and process redesign (68.8%), though eco-friendly product development (64.3%) was the least adopted. Green practices positively contributed to SME sustainability, with 77.2% affirming enhanced community welfare and 74.7% reporting reduced operational costs. Regression analysis showed a very strong positive relationship ($R = 0.864$), with green practices explaining 74.7% of the variance in SME sustainability ($R^2 = 0.747$) and exerting a significant positive effect ($\beta = 0.793$, $p < 0.05$). The study concluded that green entrepreneurship significantly enhances SME sustainability. Recommendations include government incentives, green financing, and training programmes to facilitate adoption.

Key Words: Green Entrepreneurship Practices; Sustainability; Small and Medium-Sized Enterprises; Akwa Ibom State; Nigeria

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1. Introduction

The global business landscape is undergoing a paradigm shift as environmental degradation, climate change, and resource scarcity increasingly threaten economic stability and societal well-being. Small and Medium-Sized Enterprises (SMEs), which constitute the backbone of most economies, are both contributors to and victims of environmental challenges. Globally, SMEs contribute over 80 percent of the environmental footprint, yet they have remained largely absent from sustainability discussions (PunchNG, 2025). This paradox underscores the urgent need to integrate SMEs into the green transition agenda, particularly in developing economies where regulatory frameworks and institutional support for sustainable practices remain nascent. Green entrepreneurship has emerged

as a compelling strategy for reconciling economic growth with environmental stewardship. Defined as the development and deployment of green products, services, and processes by new ventures, green entrepreneurship encompasses business activities that either reduce environmental harm or actively contribute to ecological regeneration (OECD, 2020). It represents an intentional pursuit of profit that simultaneously serves ecological and social objectives (Sustainability Directory, 2025). In the Nigerian context, green entrepreneurship has been identified as vital for sustainable development, with empirical evidence demonstrating that investment in environmental technologies and environmental reporting positively influences startup sustainability (Amokomoyen, Lamino & Bakare, 2025). Similarly, studies have shown that green entrepreneurship can decrease the negative environmental impacts of business activities while ensuring profitability (Mtswenem Achaku, Kalu Agbeaze & Owoicho Ekoja, 2022).

Nigeria presents a particularly salient context for examining green entrepreneurship and SME sustainability. The country faces profound environmental challenges, including deforestation, oil-related pollution, and inadequate waste management, which greenpreneurship can address as both a necessity and an opportunity for economic growth (IIARD Journals, 2025). Stakeholders have increasingly emphasized the urgent need to integrate Nigeria's millions of small businesses into the country's green transition (PunchNG, 2025). Recent policy developments, including the €200 million European Investment Bank loan to the Development Bank of Nigeria for supporting SMEs in green growth and digital transformation sectors, signal growing recognition of the role SMEs must play in Nigeria's sustainable development trajectory (EIB, 2026). Akwa Ibom State, located in the South-South geopolitical zone of Nigeria, presents a compelling case for investigating green entrepreneurship practices and SME sustainability. As the largest oil and gas producing state with the longest coastal line in Nigeria spanning approximately 129 kilometres, Akwa Ibom is particularly vulnerable to environmental degradation and climate change impacts (EnviroNews, 2026). The state possesses significant natural and human resources that could drive green economy growth, yet policy gaps, limited financing, and weak institutional coordination have constrained progress (PremiumTimes, 2026). Scholars have documented the imperatives of small-scale businesses for employment generation in Akwa Ibom State, noting that SMEs serve as critical drivers of local economic development (Abaikpa, Thomas, Daniel & Akpan, 2024). However, these enterprises face numerous challenges including inadequate infrastructure, limited access to finance, and weak policy support, all of which constrain their sustainability and growth potential (Abaikpa, 2025; Thomas, Abaikpa, Daniel & Akpan, 2024). With 11,990 registered SMEs in Akwa Ibom State (SMEDAN, 2024, as cited in Nwachukwu et al., 2026), understanding the nexus between green entrepreneurship practices and enterprise sustainability in this context is both timely and imperative.

Despite the growing body of literature on green entrepreneurship in Nigeria, limited empirical attention has been directed specifically to Akwa Ibom State. While studies have examined green entrepreneurship in North-Central Nigeria (Mtswenem Achaku et al., 2022), Southeast Nigeria (UNIZIK Entrepreneurial Journal, 2025), and the influence of renewable energy opportunities on manufacturing SMEs in Uyo (Nwachukwu, Akpan, Chidiebere & Okoliko, 2026), a comprehensive investigation of green entrepreneurship practices and their relationship with SME sustainability across the diverse sectors of Akwa Ibom State remains absent. Studies examining performance management systems and organizational sustainability in Akwa Ibom have highlighted the importance of institutional frameworks and management practices for enterprise longevity (Abaikpa, 2025; Abaikpa, Etuk, Thomas & Udoh, 2023), yet the specific role of green entrepreneurship practices in enhancing SME sustainability has not been adequately explored in this context. This gap is

significant given the state's unique environmental vulnerabilities, economic structure, and ongoing policy efforts to promote green development. This study is grounded in Green Theory, which posits that entrepreneurial activities can be structured to simultaneously achieve economic performance and environmental sustainability (Sustainability, 2024). Green Theory emphasizes that green entrepreneurship and structural capital serve as key drivers for SME sustainability amidst environmental fluctuations. The theory provides a robust framework for understanding how green practices—ranging from eco-innovative production to environmental reporting—can enhance the sustainability of SMEs by reducing operational costs, promoting resource efficiency, and creating competitive advantages in increasingly environmentally conscious markets.

1.1 Objective of the Study

The main objective of this study is to examine the effect of green entrepreneurship practices on the sustainability of Small and Medium-Sized Enterprises in Akwa Ibom State, Nigeria.

1.2 Research Question

What is the effect of green entrepreneurship practices on the sustainability of Small and Medium-Sized Enterprises in Akwa Ibom State, Nigeria?

1.3 Hypothesis

Green entrepreneurship practices have no significant effect on the sustainability of Small and Medium-Sized Enterprises in Akwa Ibom State, Nigeria.

2. Literature Review

2.1 Conceptual Clarifications

Green Entrepreneurship: Green entrepreneurship encompasses the development and deployment by new start-ups of green products, services, and processes that either reduce environmental harm or contribute to ecological regeneration (OECD, 2020). It involves consciously addressing environmental or social problems through entrepreneurial ideas while maintaining economic viability (European Commission, 2023). Green entrepreneurship differs from sustainable entrepreneurship in that it emphasizes compliance with environmental standards while generating profits, though both share the goal of integrating ecological considerations into business models (ScienceDirect, 2022). **SME Sustainability:** SME sustainability refers to the capacity of small and medium-sized enterprises to maintain their operations and achieve growth while minimizing negative environmental impacts and contributing positively to social and economic development. It encompasses economic viability, environmental responsibility, and social equity (Shepherd & Patzelt, 2011). In the context of Akwa Ibom State, SME sustainability is particularly significant given the role of these enterprises in employment generation and local economic development (Abaikpa et al., 2024). Scholars have conceptualized organizational sustainability as dependent on credibility, effective management systems, and adaptive capacity to environmental changes (Abaikpa et al., 2023; Abaikpa, 2025). **Green Entrepreneurship Practices:** These are the specific operational and strategic activities through which SMEs integrate environmental considerations into their business models. They include investment in environmental technologies, environmental reporting and disclosure, eco-innovative production processes, green supply chain management, waste reduction and recycling

initiatives, and adoption of renewable energy solutions (Amokomoyen et al., 2025; Nwachukwu et al., 2026).

2.2 Theoretical Review

This study is anchored on Green Theory, which provides a comprehensive framework for understanding the relationship between green entrepreneurship and business sustainability. Green Theory posits that entrepreneurial activities can be structured to simultaneously achieve economic performance and environmental sustainability (Sustainability, 2024). The theory emphasizes that green entrepreneurship and structural capital serve as key drivers for SME sustainability amidst environmental fluctuations. Green Theory suggests that businesses that proactively integrate environmental considerations into their operations are better positioned to achieve long-term sustainability because they reduce operational costs through resource efficiency, enhance their competitive advantage through eco-innovation, build resilience against environmental regulations and market shifts, and create value for stakeholders through environmental stewardship. The theory is particularly relevant to developing economy contexts where institutional pressures for environmental compliance are intensifying and market opportunities in green sectors are expanding. This theoretical framework complements the work of scholars who have emphasized the importance of effective management systems and organizational credibility for enterprise sustainability in Akwa Ibom State (Abaikpa et al., 2023; Abaikpa, 2025).

2.3 Empirical Review

Mtswenem Achaku, Kalu Agbeaze and Owoicho Ekoja (2022) investigated the effect of green entrepreneurship on the performance of SMEs in North-Central Nigeria. Using a descriptive cross-sectional questionnaire administered to 1,233 randomly selected respondents from six states and Abuja, the study found that green entrepreneurship can decrease the negative impacts of business activities on the environment while ensuring profitability. The findings demonstrated that green entrepreneurial innovative production significantly impacts competitive edge ($\beta = 0.806$, $p < 0.05$), while green entrepreneurial inclination significantly impacts customer spending ($\beta = 0.976$, $p < 0.05$). Amokomoyen, Lamino and Bakare (2025) examined the role of green entrepreneurship in enhancing startup sustainability in Nigeria, focusing on investment in environmental technologies and environmental reporting and disclosure. Using a survey research design with data from 64 startups and multiple regression analysis, the study found that investment in green technologies positively influences startup sustainability ($\beta = 0.207$, $t = 5.302$, $p = 0.009$), and environmental reporting and disclosure also positively influences startup sustainability ($\beta = 0.162$, $t = 4.212$, $p = 0.028$). Nwachukwu, Akpan, Chidiebere and Okoliko (2026) examined how entrepreneurial opportunities within the renewable energy sector influence the growth of manufacturing SMEs in Uyo, Akwa Ibom State. Using a mixed-methods approach with a stratified sample of 256 SME owners and managers, the study found a strong, statistically significant relationship between awareness of renewable energy opportunities and entrepreneurial engagement ($\beta = 0.91$, $p = 0.000$). Adoption of renewable energy solutions, particularly solar energy, significantly enhanced operational performance among manufacturing SMEs ($\beta = 0.89$, $p = 0.000$). However, barriers such as high installation costs, inadequate technical expertise, inconsistent policy frameworks, and limited access to finance were identified as major constraints. UNIZIK Entrepreneurial Journal (2025) determined the influence of green entrepreneurial innovation on the performance of SMEs in South-East Nigeria. The study

revealed that business owners agreed that green entrepreneurial innovation positively influences SMEs' performance, with a significant positive influence confirmed through hypothesis testing.

Abaikpa, Thomas, Daniel and Akpan (2024) investigated the imperatives of small-scale businesses and employment generation in Uyo Local Government Area, Akwa Ibom State. Using a survey research design with a sample of 360 respondents, the study found that small-scale businesses play a significant role in generating employment opportunities for the local population. The study recommended improved access to finance, infrastructure development, and enhanced business management training to strengthen the capacity of SMEs for sustainable growth and employment generation. These findings underscore the importance of supportive institutional frameworks for SME sustainability in Akwa Ibom State. Abaikpa (2025) examined the effect of performance management systems on small and medium enterprises in Uyo, Akwa Ibom State, Nigeria. Employing a cross-sectional survey design with a sample of 361 SME operators, the study revealed that performance management systems have a significant positive effect on SME performance. The study also identified key challenges facing SMEs in Uyo, including inadequate infrastructure, limited access to finance, weak policy support, and insufficient managerial capacity. These findings highlight the multi-faceted nature of SME sustainability challenges in Akwa Ibom State and the need for comprehensive interventions that address both internal management practices and external environmental factors. Abaikpa, Etuk, Thomas and Udoh (2023) explored credibility and organizational sustainability in Trinity Polytechnic, Uyo, Akwa Ibom State. Using a survey research design, the study found that organizational credibility—encompassing trustworthiness, transparency, and accountability—significantly influences organizational sustainability. The study emphasized that institutions that maintain high credibility standards are better positioned to achieve long-term sustainability. While this study focused on an educational institution, its findings on organizational sustainability have relevance for understanding how credibility and stakeholder trust contribute to enterprise sustainability in the broader organizational context of Akwa Ibom State.

3. Methodology

3.1 Research design

This study adopted a descriptive cross-sectional survey research design. This design is appropriate as it allows for the collection of data from a sample of SMEs at a single point in time, enabling the researcher to describe the characteristics of the population and examine relationships between green entrepreneurship practices and SME sustainability. The cross-sectional survey design has been effectively employed in similar studies on green entrepreneurship in Nigeria (Mtswenem Achaku et al., 2022; Amokomoyen et al., 2025), as well as in studies examining SME performance and sustainability in Akwa Ibom State (Abaikpa, 2025; Abaikpa et al., 2024; Thomas et al., 2024).

3.2 Study area

The study was conducted in Akwa Ibom State, Nigeria. Akwa Ibom is located in the South-South geopolitical zone and is the largest oil and gas producing state in Nigeria, with the longest coastal line in the country spanning approximately 129 kilometres. The state capital is Uyo. According to SMEDAN (2024), Akwa Ibom State has 11,990 registered SMEs, with 712 based in Uyo (Nwachukwu et al., 2026). The state is currently implementing various initiatives to promote entrepreneurship and sustainable development, including the ARISE empowerment programme and

efforts to develop a green jobs framework (Akwa Ibom State Government, 2025; Independent, 2026). Previous studies on SMEs in Akwa Ibom State have focused primarily on Uyo, with limited coverage of other local government areas (Abaikpa, 2025; Thomas et al., 2024; Nwachukwu et al., 2026). This study extended coverage to multiple local government areas to provide a more comprehensive understanding of green entrepreneurship practices across the state.

3.3 Population of the Study

The target population for this study comprised all registered Small and Medium-Sized Enterprises in Akwa Ibom State. According to the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2024), there are 11,990 registered SMEs in Akwa Ibom State. This population includes enterprises operating across various sectors, including manufacturing, services, agriculture, trade, and renewable energy.

3.4 Sampling Technique and Sample Size

A stratified random sampling technique was employed to select participants for this study. Stratification was based on the local government areas of Akwa Ibom State and the sector of operation of the SMEs. This technique ensures representation across different geographical areas and business sectors. The sample size were determined using the Yamane formula:

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

Where: N = Population. 1 = constant. e = Level of significance. n = sample size.

$$\begin{aligned} n &= \frac{11,990}{1 + 11,990(0.05)^2} \\ n &= 387 \end{aligned}$$

Thus, a sample size of approximately 387 SME owners and managers was selected for the study. This sample size is consistent with previous studies on SMEs in Akwa Ibom State, which have employed sample sizes ranging from 256 to 361 respondents (Nwachukwu et al., 2026; Abaikpa, 2025; Abaikpa et al., 2024).

3.5 Instrument for Data Collection

A structured questionnaire was developed as the primary instrument for data collection. The questionnaire was divided into sections covering: (a) demographic information of respondents and their enterprises; (b) green entrepreneurship practices, including investment in environmental technologies, environmental reporting and disclosure, eco-innovative production, and renewable energy adoption; (c) measures of SME sustainability, including economic performance, environmental performance, and social performance. Items were measured using a five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The questionnaire was pre-tested for validity and reliability using a pilot study with 30 SME owners in a non-sample area. The instrument was designed to capture both the green practices adopted by SMEs and the perceived sustainability

outcomes, drawing on validated scales from previous studies (Amokomoyen et al., 2025; Abaikpa, 2025).

3.6 Method of Data Analysis

Data collected were analyzed using both descriptive and inferential statistics. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the demographic characteristics of respondents and their responses to questionnaire items. Inferential statistics, specifically simple linear regression analysis, was employed to test the hypothesis regarding the effect of green entrepreneurship practices on SME sustainability. The regression analysis were determine the nature and significance of the relationship between the independent variable (green entrepreneurship practices) and the dependent variable (SME sustainability). Following the approach of previous studies in Akwa Ibom State (Abaikpa, 2025; Abaikpa et al., 2024), regression coefficients, t-statistics, and p-values will be used to determine the significance of relationships. All analyses were conducted using Statistical Package for Social Sciences (SPSS) version 27.0, with statistical significance set at $p < 0.05$.

4. Data Presentation, Analysis and Findings

4.1 Presentation of Data

This section is basically designed to present, analyse and interpret the primary data obtained via the questionnaire which was purposively administered to the respondents. These are shown in the Table 1.

Table 1: Number of questionnaire copies administered and returned

		Percentage
Copies of Questionnaire Administered	387	
Copies of Questionnaire Retrieved	356	91.9
Copies of Questionnaire not Retrieved	31	8.1
Total		100

Table 2: Response on Green Entrepreneurship Practices

Green Entrepreneurship Practices	SA	A	U	D	SD	Total
Our enterprise consistently allocates financial resources toward upgrading equipment and machinery to reduce environmental harm.	168 (47.2%)	109 (30.6%)	19 (5.3%)	38 (10.1%)	24 (6.7%)	356 (100%)
We regularly publish or internally document reports that track our enterprise's environmental footprint and waste management.	124 (34.8%)	114 (32.0%)	36 (10.1%)	55(15.4%)	25 (7.6%)	356 (100%)
Our production/service delivery processes are continuously redesigned to minimize the use of raw materials and non-recyclable inputs.	142 (39.9%)	103 (28.9%)	19 (5.3%)	54 (15.2%)	38 (10.7%)	356 (100%)
We actively develop new products or services that have a lower environmental impact compared to standard industry offerings.	93 (26.1%)	136 (38.2%)	29 (8.1%)	67 (18.8%)	31 (8.7%)	356 (100%)
A significant portion of our enterprise's daily energy consumption comes from renewable sources (e.g., solar, wind, or biomass).	171 (48.0%)	112 (31.5%)	19 (5.3%)	31 (8.7%)	23 (6.5%)	356 (100%)

Table.2 presents the responses of 356 respondents on the green entrepreneurship practices adopted by enterprises. The findings generally indicate a high level of adoption of environmentally responsible entrepreneurial practices among the enterprises studied. The first statement reveals that 168 respondents (47.2%) strongly agreed and 109 respondents (30.6%) agreed that their enterprises consistently allocate financial resources toward upgrading equipment and machinery to reduce environmental harm. Thus, 77.8% of the respondents expressed agreement with the statement, while only 16.8% disagreed and 5.3% remained undecided. This suggests that most enterprises recognize the importance of investing in modern and environmentally friendly equipment as a strategy for reducing pollution, improving resource efficiency, and minimizing environmental damage. Similarly, the second statement shows that 124 respondents (34.8%) strongly agreed and 114 respondents (32.0%) agreed that their enterprises regularly publish or internally document reports tracking their environmental footprint and waste management. The combined agreement of 66.8% indicates that a considerable proportion of the enterprises engage in environmental monitoring and reporting. However, the relatively higher proportion of disagreement (23.0%) suggests that environmental documentation and reporting practices may not yet be fully institutionalized across all enterprises. The third statement indicates that 142 respondents (39.9%) strongly agreed and 103 respondents (28.9%) agreed that their production or service delivery processes are continuously redesigned to minimize the use of raw materials and non-recyclable inputs. The combined agreement of 68.8% demonstrates that many enterprises are making efforts to improve operational efficiency and reduce waste. This finding suggests that green entrepreneurship is reflected not only in environmental policies but also in the redesign of operational processes to promote resource conservation and sustainable production. Furthermore, 93 respondents (26.1%) strongly agreed and 136 respondents (38.2%) agreed that their enterprises actively develop new products or services with lower environmental impacts than standard industry offerings. Although the combined agreement of 64.3% still represents a majority, this was the lowest level of agreement among the five statements. This may imply that while many enterprises are adopting environmentally responsible practices, the development of genuinely eco-friendly products and services remains relatively more challenging, possibly because of the financial, technological, and innovative capabilities required. Finally, the table reveals that 171 respondents (48.0%) strongly agreed and 112 respondents (31.5%) agreed that a significant portion of their enterprises' daily energy consumption comes from renewable sources such as solar, wind, or biomass. The combined agreement of 79.5% represents the highest level of positive response across the indicators. This suggests a strong inclination among the enterprises toward the adoption of renewable energy sources, which can reduce dependence on fossil fuels, lower carbon emissions, and contribute to long-term environmental sustainability.

Table 3: Response on SME Sustainability

SME Sustainability	SA	A	U	D	SD	Total
Adopting green practices has led to a noticeable reduction in our operational costs (e.g., energy, water, or material expenses).	136 (38.2%)	130 (36.5%)	32 (9.0%)	44 (12.4%)	14 (3.9%)	356 (100%)
Our environmental initiatives have improved our market position and opened access to new customer segments.	146 (41.0%)	118 (33.1%)	22 (6.2%)	41 (11.5%)	29 (8.1%)	356 (100%)
Over the past two years, our enterprise has significantly reduced its emission levels and solid waste generation.	139 (39.0%)	105 (29.5%)	17 (4.8%)	68 (19.1%)	27 (7.6%)	356 (100%)
Our business operations actively contribute to improving the health and living standards of the local community.	144 (40.4%)	131 (36.8%)	25 (7.0%)	32 (9.0%)	24 (6.7%)	356 (100%)
Our green initiatives have created a safer, healthier, and more satisfying work environment for our employees.	122 (34.3%)	112 (31.5%)	48 (13.5%)	47 (13.2%)	27 (7.6%)	356 (100%)

Table 3 presents the responses of 356 respondents on the sustainability of small and medium-sized enterprises (SMEs). The findings indicate that the adoption of green practices has contributed positively to the economic, environmental, social, and workplace sustainability of the businesses surveyed. The first statement, "Adopting green practices has led to a noticeable reduction in our operational costs," shows that 136 respondents (38.2%) strongly agreed and 130 respondents (36.5%) agreed, representing a combined positive response of 74.7%. Only 16.3% disagreed or strongly disagreed, while 9.0% were undecided. This suggests that most SMEs perceive green practices as contributing to cost efficiency through reduced energy, water, and material consumption. Regarding the statement that environmental initiatives have improved market position and provided access to new customer segments, 146 respondents (41.0%) strongly agreed and 118 (33.1%) agreed, giving a combined positive response of 74.1%. This indicates that environmental responsibility may enhance the competitiveness and market appeal of SMEs, particularly among customers who value environmentally responsible business practices. The third statement shows that 139 respondents (39.0%) strongly agreed and 105 (29.5%) agreed that their enterprises had significantly reduced emission levels and solid waste generation over the past two years. The combined agreement of 68.5% indicates a generally positive environmental outcome. However, 26.7% of respondents disagreed or strongly disagreed, suggesting that environmental improvements may not have been equally achieved across all the businesses studied. On the contribution of business operations to the health and living standards of the local community, 144 respondents (40.4%) strongly agreed and 131 (36.8%) agreed, representing a combined positive response of 77.2%. This was the highest positive response recorded among the items measuring environmental and social sustainability. The result suggests that many SMEs perceive their business activities and green initiatives as contributing positively to community welfare. Finally, 122 respondents (34.3%) strongly agreed and 112 (31.5%) agreed that green initiatives had created a safer, healthier, and more satisfying work environment for employees. The combined positive response of 65.8% indicates that green practices have also contributed to employee well-being. Nevertheless, 20.8% of respondents disagreed or strongly disagreed, while 13.5% were undecided, indicating that the workplace benefits of green initiatives may vary among SMEs.

4.2 Testing of Hypothesis

Green entrepreneurship practices have no significant effect on the sustainability of Small and Medium-Sized Enterprises in Akwa Ibom State, Nigeria.

Table 4: Regression Analysis

a) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.864 ^a	.747	.746	.41112

a. Predictors: (Constant), Green_Entrepre

b) ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	176.863	1	176.863	1046.388	.000 ^b
	Residual	59.834	354	.169		
	Total	236.698	355			

a. Dependent Variable: SMEs_Sustainability

b. Predictors: (Constant), Green_Entrepre

c) Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	.819	.096	8.537	.000
	Green_Entrepre	.793	.025	.864	.000

a. Dependent Variable: SMEs_Sustainability

The regression analysis examines the effect of Green Entrepreneurship Practices (Green_Entrepre) on SME Sustainability (SMEs_Sustainability) among the businesses studied.

The model summary indicates an R-value of 0.864, showing a very strong positive relationship between green entrepreneurship practices and SME sustainability. The R^2 value of 0.747 indicates that green entrepreneurship practices explain 74.7% of the variation in SME sustainability. The adjusted R^2 of 0.746 confirms that the explanatory power of the model remains stable after adjustment for the number of predictors. The remaining 25.3% of the variation in SME sustainability is attributable to other factors not included in the model. The ANOVA result shows that the regression model is statistically significant, with an F-statistic of 1046.388 and a p-value of 0.000 ($p < 0.05$). This indicates that the model provides a statistically significant explanation of the relationship between green entrepreneurship practices and SME sustainability. Therefore, the model is considered suitable for predicting SME sustainability. The coefficient results further show that Green Entrepreneurship Practices have a positive and statistically significant effect on SME Sustainability. The coefficient of 0.793 indicates that a one-unit increase in green entrepreneurship practices is associated with a 0.793-unit increase in SME sustainability, holding the constant term constant. The standardized beta coefficient of 0.864 confirms the very strong positive effect of green entrepreneurship practices on SME sustainability. This effect is statistically significant, as indicated by the t-value of 32.348 and p-value of 0.000 ($p < 0.05$). Based on the result, the null hypothesis that green entrepreneurship practices have no significant effect on SME sustainability is rejected. The study therefore concludes that green entrepreneurship practices have a significant and positive effect on the sustainability of SMEs. This implies that the adoption of environmentally responsible and sustainable business practices contributes significantly to the ability of SMEs to reduce costs, improve market competitiveness, enhance environmental performance, support communities, and create healthier working environments.

4.3 Discussion of Finding

The findings of the study reveal that green entrepreneurship practices have a strong and positive relationship with SME sustainability. The model produced an R-value of 0.864, indicating a very strong positive association between green entrepreneurship practices and the sustainability of SMEs. This suggests that SMEs that actively adopt environmentally responsible business practices are more likely to achieve improved sustainability outcomes. The R^2 value of 0.747 further indicates that green entrepreneurship practices explain 74.7% of the variation in SME sustainability, while the remaining 25.3% may be explained by other factors such as access to finance, managerial capability, innovation, government support, market conditions, and technological development. The adjusted R^2 of 0.746, which is almost identical to the R^2 value, further demonstrates that the model has strong explanatory power and that its result is not substantially affected by model adjustment. The finding

can be explained by the fact that green entrepreneurship enables SMEs to integrate environmental considerations into their business operations and strategic decisions. Practices such as reducing energy and material waste, adopting digital and resource-efficient technologies, improving operational efficiency, reducing emissions, and developing environmentally responsible products can contribute to both environmental protection and business performance. In particular, the adoption of green practices may reduce operating costs in the long term, enhance the reputation and competitiveness of SMEs, attract environmentally conscious customers, improve access to emerging markets, and promote the efficient use of scarce resources. These benefits can strengthen the capacity of SMEs to survive and remain competitive in a changing business environment. The finding also demonstrates that sustainability extends beyond environmental protection to include economic and social outcomes. Green entrepreneurial practices may enhance the long-term financial viability of SMEs by reducing unnecessary operational expenses and improving resource efficiency. Similarly, environmentally responsible business operations can contribute to community welfare and create safer and healthier workplaces for employees. Therefore, the strong relationship observed in the study suggests that green entrepreneurship serves as an important strategic mechanism through which SMEs can simultaneously pursue environmental responsibility, economic efficiency, social welfare, and long-term business survival. This collaborate with the study and finding of Mtswenem Achaku, Kalu Agbeaze and Owoicho Ekoja (2022) who investigated the effect of green entrepreneurship on the performance of SMEs in North-Central Nigeria. The finding also collaborate with the study and finding of Amokomoyen, Lamino and Bakare (2025) who examined the role of green entrepreneurship in enhancing startup sustainability in Nigeria, focusing on investment in environmental technologies and environmental reporting and disclosure.

5. Summary Of Findings, Conclusion and Recommendations

5.1 Summary of Findings

The study examined the effect of green entrepreneurship practices on the sustainability of Small and Medium-Sized Enterprises (SMEs) in Akwa Ibom State, Nigeria. Data were collected from 356 respondents through a structured questionnaire, achieving a high response rate of 91.9%. The findings revealed a high level of adoption of environmentally responsible entrepreneurial practices among SMEs, with strong commitments to renewable energy adoption (79.5%), financial resource allocation for environmental upgrades (77.8%), process redesign (68.8%), and environmental reporting (66.8%), though eco-friendly product development (64.3%) remained the least adopted practice. The study further found that green practices contributed positively to SME sustainability, with respondents affirming reductions in operational costs (74.7%), improved market position (74.1%), enhanced community welfare (77.2%), reduced emissions and waste (68.5%), and improved workplace environments (65.8%). Regression analysis revealed a very strong positive relationship between green entrepreneurship practices and SME sustainability ($R = 0.864$), with green practices explaining 74.7% of the variation in SME sustainability ($R^2 = 0.747$). The model was statistically significant ($F = 1046.388$, $p < 0.05$), and the coefficient of 0.793 indicated that a one-unit increase in green entrepreneurship practices leads to a 0.793-unit increase in SME sustainability. Consequently, the null hypothesis was rejected, confirming that green entrepreneurship practices have a significant and positive effect on SME sustainability. These findings align with previous studies by Achaku, Agbeaze, and Ekoja (2022) and Amokomoyen, Lamino, and Bakare (2025), reinforcing the conclusion that green entrepreneurship is a vital strategic mechanism for enhancing SME sustainability..

5.2 Conclusion

Based on the findings of this study, it is concluded that green entrepreneurship practices are significantly adopted among SMEs in Akwa Ibom State, as enterprises demonstrate strong commitment to financial resource allocation for environmental upgrades, renewable energy adoption, process redesign, and environmental reporting, though eco-friendly product development remains relatively challenging. It is further concluded that green entrepreneurship practices significantly enhance SME sustainability, as the adoption of environmentally responsible business practices contributes to cost reduction, market competitiveness, environmental performance, community welfare, and healthier work environments. The study also concludes that there is a strong positive relationship between green entrepreneurship practices and SME sustainability, as the regression analysis confirms that green practices account for 74.7% of the variation in SME sustainability, indicating that environmental responsibility is a critical driver of business sustainability. Moreover, it is concluded that sustainability extends beyond environmental protection to include economic and social outcomes, as green entrepreneurial practices simultaneously promote financial viability, social welfare, and long-term business survival. Finally, it is concluded that SMEs that integrate environmental considerations into their strategic decisions are better positioned to survive and remain competitive in a changing business environment by reducing operational costs, enhancing reputation, attracting environmentally conscious customers, and accessing emerging markets.

5.3 Recommendations

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

- SME owners and managers should invest in environmentally friendly technologies, adopt renewable energy, develop eco-friendly products, and strengthen community engagement to
- Government should provide incentives and supportive policies, financial institutions should offer green financing products, and business support organizations should conduct training and mentorship programs to facilitate green entrepreneurship adoption.
- Future studies should explore the long-term effects of green entrepreneurship, examine moderating factors such as access to finance and government support, and conduct comparative analyses across regions and sectors.

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