Innovations

Ecological Entrepreneurship and Sustainability of Small and Medium Scale Enterprises in Enugu State Nigeria

[1]AGU, Okoro Agu; [2]Okocha, Ebere Rejoice; [3]Anyanwu, Kingsley Ndubuisi; [4]Paschal, Chima Anyanwu; [5]Dickson, Ben Uche; [6]Anichebe Nnaemeka Augustine

[1,4] Department of Business Management, Evangel University Akaeze Ebonyi State

[2] Department of Marketing, Evangel University Akaeze Ebonyi State, Nigeria

[3] Department of Management, Kingsley Ozumba, Mbadiwe University Ogboko, Ideato South Imo State, Nigeria

[5] Department of Marketing; Evangel University Akaeze

[6] Department of Business Management, College of Management Sciences, Evangel University, Akaeze Ebonyi State, Nigeria

Corresponding author: **Okocha, Ebere Rejoice**

Abstract: *The Study focuses on ecological entrepreneurship and sustainability of small and medium scale enterprises in Enugu state Nigeria, Specifically the study aimed to pursue the following objectives: to determine the effect of innovation and research development on sustainability of small and medium scale enterprises, ascertain the nature of the relationship between mentorship education and sustainability of small and medium scale enterprises and determine the effect of government policy on sustainability of small and medium scale enterprises . The study had a population size of registered small and medium scale enterprises of109which was also used as sample size. Instruments used for data collection were primary questionnaires and interview. The total number of 109` copies of the questionnaire were distributed while 87 copies were properly filled/returned & used while 22 copies were not properly filled. Survey research design was adopted for the study. Three hypotheses were tested using Pearson product moment correlation coefficient and simple linear regression tool. The findings indicated that Innovation and research development have significant positive effect on sustainability of small and medium scale enterprises. There was a positive relationship between mentorship education and sustainability of small and medium scale enterprises. Government policy had a significant effect on sustainability of small and medium scale enterprises. The study recommends that owners of small and medium scale enterprises should alway go for industrial training in order to embrace and update with the current innovation and knowledge to be ahead of other competitors and be safe from environmental turbulent*

Keywords: *Ecological Entrepreneurship; Sustainability; Innovation and Research Development; Mentorship Education and Government Policy*

Introduction

Over the past 50 years ecological entrepreneurship has evolved. It has raised awareness, inspired frameworks for environmental stewardship and "mainstreaming" of ecologically sustainable approaches, in all sectors of the economy, with holistic consideration of product life cycles, and of businesses in general. Ecological entrepreneurship is motivated by deep emotional, intellectual, and ethical appreciation of nature, and by a sense of urgency. Its gain is defined in terms of "sustainability" and environmental stewardship, to the benefit of present and future generation .The aim of eco-entrepreneurship is the initiation and realization of projects related to environmental protection, dissemination of clean technologies, recycling and deepening society's knowledge and awareness, striving to create a green, more eco-friendly economy. It is widely accepted that eco-entrepreneurship plays an important role in minimizing the negative impact of organizations and people on the environment. It includes actions in the development and implementation of (Wzorce, 2011; Huczek, 2010)

In other words, inability of entrepreneurs to conduct their business within the purview of green entrepreneurship represents failure to recognize opportunities in greening. Therefore, Dean and McMullen (2007) observe that green entrepreneurs are taken advantage of market failure of old business practices by filling these need gaps in the emerging green markets. Furthermore, the need to identify prospects and challenges in the process of going green as entrepreneurs search for opportunities in this regard is equally of important (Esty & Winston, 2009). Thus, this led to the springing up of business ventures with green outlook. Hence, green ventures lay emphasis on efficiency, innovation, market acceptability, revenue growth, flexibility, effective risk and relationship management and other market benefits (Porter & Van der Linde 1995). In addition to the above, due to the negative effects of unsustainable business practices of organizations', which usually manifest in form of environmental pollution, attendants destruction of the natural environment and other valuables, organizations or entrepreneurs should be aware of the consequences of their actions or inactions in this regard. Universally, sustainable development has been recognized as a significant issue that must be carefully considered in any strategic session or discourse, be it business organization, government or society (Kulkarni & Pammar, 2019)

Socially and sustainably minded entrepreneurs (or social-/eco-entrepreneurs) solve environmental problems through the market, identifying environmental challenges and reinterpreting them as market gaps. They subsequently aim to turn those gaps into business opportunities and reduce or eliminate negative impacts on the environment through market mechanisms by offering their products and services (Carter, 2010). Eco-entrepreneurs have an overall business approach similar to more conventional entrepreneurs, including a revenue model. However, major drivers for setting up their

enterprise are the strong ethical and environmental considerations which form part of their business model (OECD, 2011). In addition, their entrepreneurial activity has an overall positive effect on the environment (Sustain Ability, 2007). Eco-entrepreneurs are often closely connected to SMEs as they usually operate smaller business and/or target their services particularly to SMEs

Eco-entrepreneurs do not only strive to solve environmental problems but are vital agents of change. In a resource-constrained and market-based world, they are pioneers and leaders of sustainability as they provide the business community with a role model using green business practices (Schaper, 2005). Eco-entrepreneurs are driving the mainstream adoption of environmental practices and help to implement and fix change in society. They are long-term problem-solvers, since they usually aim to be self-sustaining while transforming environmental externalities into revenue generating business models. Their success does not depend on continued external funding but is self-perpetuating (Carter, 2010)

For eco-entrepreneurs in Europe, such a situation provides considerable business opportunities. They can offer services to SMEs but also to bigger companies to help them meet environmental challenges. They can promote resource efficiency or provide support in the face of new environmental regulation, sometimes even anticipating it to gain business advantages

Green or eco– entrepreneurship can be understood as the act of operationalizing innovations pertaining to sustainable, alternative technologies with the primary intention of promoting and contributing to a low– carbon/green economy. An entrepreneur or a venture qualifies as green or eco–driven if they merge business opportunities, activities, and intentions with ecological awareness and considerations to create value, shifting the patterns of economic development into greener ones. The role of green entrepreneurship in engendering shifts in economic practices 'can be set within…ecological modernization, at the heart of which is a relatively optimistic view of the potential for technological change to lead to solutions for environmental problems' (Gibbs 2009, p. 63)

Statement of the Problem

In other words, businesses firms that have come to the realization of the necessity of greening are now being strategically positioned for sustainable market opportunities compared to those that are pretending to integrate greening into their management processes just when they are not. Although, the challenge being faced by the young green entrepreneurs in this regard cannot be underestimated. These challenges, which range from the lack of adequate government supports to the difficulty in assessing funds and markets among others, need to be addressed should green entrepreneurship be widely embraced. However, the resolve to be environmentally oriented and compassionate establishments gave green

entrepreneurs the resilience to surmount these challenges. Hence this genuineness of purpose ended up given them good reputation of environmental friendly firms with products and services, which customers would gladly patronize

Objectives of the study

The broad objective of the study focuses on ecological entrepreneurship and sustainability of small and medium scale enterprises in Enugu State Nigeria. The specific objective are**:**

- To determine the effect of innovation and research development on sustainability of small and medium scale enterprises in Enugu State Nigeria
- To ascertain the nature of the relationship between mentorship education and sustainability of small and medium scale enterprises
- To determine the effect of government policy on sustainability of small and medium scale enterprises

Research Hypotheses

The following hypotheses were formulated for this study

- Innovation and research development effect sustainability of small and medium scale enterprises in Enugu State Nigeria
- There is a relationship between mentorship education and sustainability of small and medium scale enterprises
- Government policy has effect on sustainability of small and medium scale enterprises

Significant of the study

The study findings can inform sustainable business practices and provide insights for entre preneurs policymakers, and stakeholders on how to promote eco friendly entrepreneurship

Review of Related Literature

Dale (2018) describes green entrepreneurship as a story telling process through which an entrepreneur obtains supports from stakeholders to pursue his/her ambitions. Shu (2017) suggests that green entrepreneurship should be defined in terms of adopted technological line of production or firm's activities. Green Project (2012) defines green entrepreneurship as activities that are consciously addressing environmental/social problems/needs through implementation of entrepreneurial ideas amidst high risks and expectation of net positive impact on environment and financial sustainability

Innovation/research development and Sustainability

The eco-innovation is a newly introduced concept (Bossle et al. 2016). In one of the first eco-innovation studies, it was defined as "new products and processes which provide both the customer and business value while significantly decreasing environmental impacts" (James 1997, p. 43). Meanwhile, Rennings (2000) explain eco-innovation to be a change toward sustainable development by delivering through technological enhancement, social connection, and organizational reform (Costantini et al. 2017; Hu et al. 2019). Eco-innovation is the advancement of product, service, and process, which leads to sustainability, through the commercial use of technology to generate ecological enhancements either directly or indirectly. Eco-innovation covers a range of concepts and varies from the development of ecological technologies to promote socially acceptable, sustainable creative growth.

Mentoring education and Sustainability

Mentoring is a human research development approach where an existing member of staff or an external collaborator guides managers, newcomers or less-experienced people in a task to develop professional skills, attitudes and competencies. Mentoring is a key process for knowledge management. In a process of transferring tacit knowledge and retaining expertise within the organization, mentoring can also help the mentee to become a recognized and accepted member of the community, by passing on corporate vision and values and improving his grasp of corporate networking (www.knowledge-management-tools.net) Within SMEs that already use business mentors can play general roles across all areas of company business to a specific focus role, i.e., in the sales or marketing areas. Mentors can help to carry out a SWOT analysis including existing knowledge gaps and staff skills needs. Often SMEs need to strengthen their current market position before entering international markets with new products and need help in this transition. Particularly important are mentors for first-time SME entrepreneurs in assembling teams, developing business plans, product development or sales and marketing strategies. They can help companies to prepare an investment plan and guide them in implementing this. All these are steps to sustainability. Mentoring can support sustainable development by allowing SMEs to acquire knowledge from internal and external sources that will allow them to achieve their current strategies and create relationships that may help them in the future

Government Policy and Sustainability

Sathe (2006) in particular argues that Government regulations and their bureaucratic procedures can hinder as well as facilitate entrepreneurship activity such as new business origination. The Government can occur up with policies that can boost and support the growth of novel technologies, products, and solutions. On the other

hand, Government can likewise seem to hinder SME firm performance when it introduces policy which can restrict the autonomy, as well as the entrepreneurial freedom of some variety. In an effort to resolve the failure rate of SMEs, the Government decided to create the former institution sector sound, stable, honest, dependable, internationally competitive, and to strengthen its ability to provide acknowledgment to the SMEs. Governments develop the patterns and frameworks during which lines are able to contend against each other. Spasmodically the Government will shift these designs and frameworks cause SMEs to improve the way they operate. Performance of SMEs is thus vigorously laid low by Government policies. The Government of the daytime, often amendment laws in line with its political policies. Therefore, SMEs regularly has to be compelled to alterations in the legal framework. These policies will cause a substantial impact on the competitiveness, ambitiousness and expediency of SMEs.

Corporate sustainability

Corporate sustainability consists in carrying out actions that improve the economic growth and long-term profitability of an organisation (Porter, 1985). Furthermore, the sustainable enterprise, in contrast to the traditional company, as the most important constituent of business and society, should bear responsibilities towards the society and environment that go far beyond their economic obligations (Hart, 1995; Tien et al., 2019a, 2019b). Corporate sustainable development is a kind of business strategy that attempts to meet the needs of stakeholders without compromising natural resources and interests of local community (Dyllick and Hockerts, 2002; Tien, 2015). For the purpose of sustainable development, on the push side, society expects managerial and entrepreneurial behaviours to comply with ethical standards and orient towards common benefit and interest of the society (Drucker, 1998; Tien and Anh, 2018). On the pull side, in order to maintain full prestige and reputation of the company, managers and entrepreneurs should make their business decisions responsibly, be hold accountable for them, considering public opinion and stakeholders' interest (Tien and Anh, 2018; Man and Macris, 2015).

Theoretical Review

Legitimacy Theory

Legitimacy theory as an addendum to the real institutional theory proposes that entrepreneurs should have knowledge about their institutions and structures within the remit of their operating environment (Demuth, 2014). These entrepreneurs should be able to identify and understand these institutions and structures before they could gain legitimacy to provide any goods or services for public acceptance. For instance, Hörisch et al. (2017) posit that institutions are deep-seated aspects of

the social structures with tendency to define or issue authoritative guidelines, which must be followed by the firms or entrepreneurs. Similarly, Khan (2015) argues that unless there is an equilibrium between the economic growth for wealth accumulation and protection of the environment, no institution can gain legitimacy let alone sustainable development. Legitimacy theory is one of the most recently discovered alternatives within the remit of institutional theory which enjoins entrepreneurs to leverage on the institutions to gain legitimacy needed for survival (Jones & Gethinger, 2016; Shapira et al., 2014). Thus, legitimacy in this context represents a perception of the nature of the relationship between a firm and other institutions within the purview of its operations vis-à-vis the societal norms and values all of which must remain in tandem with one another. This is so because greening is a sustainability oriented business management approach that has come to right historical wrongs done by the old business management approach to business operations.

Empirical Review

Wafa, Sebastian and David (2021) did a study on the influence of green entrepreneurial activity on sustainable development, using institutional economics as a theoretical framework. Also, the role of entrepreneurship policy is analysed in the context of Saudi Arabia. Using information from the General Authority for Statistics from 13 Saudi Arabian cities, the main findings show that green entrepreneurship positively contributes to the economic, social, and environmental components of sustainable development during the period 2012–2017. These results demonstrate a measurable indication of sustainable development outcomes, whereby Saudi Arabian institutions align entrepreneurial activities with a positive triple bottom line effect. Accordingly, these findings contribute new evidence to justify government commitment to supporting green entrepreneurship in Saudi Arabia and encourage future domestic policies.

Ebo and Simona (2017) conducted a study on prospects of Green entrepreneurship as a driver for sustainable and inclusive economic growth in rural Ghana. However, Ghana faces severe youth unemployment problem and it is estimated that about 300,000 such Ghanaians enters the labor market each year but a mere 2% find jobs with significant numbers of university graduates going to the informal sector and private sector. Green entrepreneurship therefore can be a powerful tool for tackling unemployment and capitalizing on positive economic trends in Ghana. This paper through document content analysis methodology carefully analyzes the characteristics of green entrepreneurship that distinguishes it from regular entrepreneurship and factors that might hinder or stimulate green entrepreneurship in a transition economy like Ghana. This study was undertaken to better understand how to promote green entrepreneurship in Ghana, where there is limited policy and

institutional support. The paper proposes a relationship model between green entrepreneurial characteristics, institutional environment and entrepreneurial innovativeness.

Navarathinam and Amutha (2022) did a study on green Entrepreneurship: A Sustainable Development Initiative With Special Reference To Selected Districts. To achieve the study objectives, we adopted integrative review of literature methodology. Concerning the findings, the paper identified new trends in green entrepreneurship and identified the need to clarify some relevant concepts, such as: industry life cycle, entrepreneurship knowledge sharing, and institutional framework, and entrepreneurship financing, green entrepreneurship decision-making process among others. We also identified the need to properly delineate the process leading to the practice of green entrepreneurship as a departure from the old entrepreneurship philosophy. Therefore, we recommend that further studies should endeavor to focus on identifying the step-by-step processes involved in the green entrepreneurship practice for the possibility of wider accessibility and ease of understanding of prospective green entrepreneurs in the interest of green entrepreneurship growth and development.

Alabi, David and Aderinto (2019) evaluate the impact of government policies on business growth of small and medium enterprises that operates in six states that made up the South-west geopolitical zone of Nigeria. The study adopted descriptive ex-post facto type and involved both primary and secondary data. The researcher used stratified sampling technique for determination of exact sample population to use for the study. Structured questionnaires were used as the main tools data collection. Both the descriptive and inferential analytical techniques of the SPSS packaged were used to analyze the data obtained from the respondents. The result of this research shows that there is a significant relationship between government policy and business growth of Small and Medium Enterprises (SMEs) in South Western Nigeria. These results indicate the need for the Nigeria government to formulate and implement policies that will help ensure the optimal performance and subsequent survival of small scale businesses in the country

Nsorah, Mintah and Abudu (2022) did a study on the Impact of Government Policies and Small Scale Enterprise Development Activities on Economic Growth Evidence from Nigeria. The study sampled a valid respondents of 250 to make a generalization using Yaro Yamane formulae. The study used Cronbach's Alpha, Pearson's Correlation, Durbin-Watson, ANOVA, and OLS Regression. The results reflects the level of significant impact of the regressed variables on the SSEs and economic growth at 10%, 1%, 5%, and 1%, significant P-values. This indicate that SSE progress, expansion and promotion are significant factors or elements that can impact positively on SSE development and economic growth (EG). We accept all hypotheses in this study due to their relevance to the measured variable. Effective

government policy boosts SSE performance and economic growth. We agree that good government policy for SMEs is vital to most economies' long-term growth and prosperity. Effective government policies affect SSEs' long-term viability. The correlation analysis connected all variables positively. These issues may affect SSE's performance and economic growth. Effective government policies, SSE advancement, expansion, and promotion are combined efforts between the government and entrepreneurs. It will help firms or organizations to expand, find new possibilities, and improve. Besides, the ability of entrepreneurs to continue to develop and offer services depend on having access to financial resources to expand their businesses is a means to contribute to economic growth and development because the continual function of these SSEs will create employment, reduced unemployment and generate revenue through taxes for development intervention. Hence, a need for government to create the enabling environment for small scale business activities to thrive

Methodology

The study adopted research survey design. The populations of the study consist of owners of small and medium scale enterprises in Enugu state (109) who registered with MAN,. Same was used as sample size because of the smaller nature of the population. Out of 109 copies questionnaire distributed, 87 copies of questionnaire were returned while 22 copies not returned.The instrument was validated using face to face content validity by giving the tool to academicians who made the necessary corrections so that the device can measure what it ought to measure. The tool used for test of hypotheses were simple linear regression and Pearson product moment correlation coefficient. The reliability of the instrument was obtained using Spearman order correlation coefficient. The coefficient value was 0.671 indicating a High Internal Consistency of the Instrument.

Data Analysis and Discussion

The data obtained from the field were presented and analyzed with descriptive statistics to provide answers for the research questions while the corresponding hypotheses were tested with multiple linear regression at 0.05 alpha level. The five Likert scale form was design as SA = Strongly Agree, A= Agree, U= Undecided, D = Disagree and SD = Strongly Disagree

s/n	**Innovation and research development effect sustainability of small and medium scale enterprises**						
	Statement	SA	A	U	D	SD	Total
1	Technological enhancement that brings new era for small businesses	49 (56.32%)	26 (29.89 %)	4 (4.60 %)	5 (5.75%)	3 (3.44 %)	**87**
2	New product introduction satisfy customers and shareholders	52 (59.77%)	19 (21.84 %)	5 (5.75 %)	6 (6.89%)	5 (5.75 %)	**87**
3	Using a new process that decrease negative environmental impact	30 (34.48%)	43 (49.43 %)	7 (8.05 %)	5 (5.75%)	2 (2.30 %)	**87**
4	Eco-innovation is the advancement of product, service, and process, which leads to sustainability	25 (29%)	50 (57%)	5 (6%)	4 (5%)	3 (3%)	**87**
	There is a relationship between mentorship education and sustainability of small and medium scale enterprises						
5	Education mentoring impact positive skills in small and medium enterprise	35 (40%)	39 (45%)	2 (2%)	7 (8%)	4 (5%)	**87**
6	Employees of small and medium enterprises gain competencies through mentorship	50 (58%)	25 (29%)	5 (5%)	4 (5%)	4 (5%)	**87**
7	Mentors can help to carry out a SWOT in order determine future businesses	55 (63%)	21 (24%)	4 (5%)	5 (6%)	2 (2%)	**87**
8	Mentoring can support sustainable development by allowing SMEs to acquire knowledge from internal and external sources.	44 (51%)	33 (38%)	3 (3%)	3 (3%)	4 (5%)	**87**

Government policy has effect on sustainability of small and medium scale enterprises							
9	Government can come up with policies that can boost and support the growth	32 (37%)	46 (53%)	3 (3%)	5 (6%)	1 (1%)	**87**
10	Government can hinder SME firm performance when it introduces policy which can restrict the autonomy, as well as the entrepreneurial freedom of some variety	60 (69%)	20 (23%)	1 (1%)	3 (3%)	3 (3%)	**87**
11	cies can cause a substantial impact on the competitiveness among SME	35 (40%)	42 (48%)	2 (2%)	4 (5%)	4 (5%)	**87**
12	rformance of SMEs is thus vigorously laid low by Government policies	31 (36%)	47 (54%)	1 (1%)	4 (5%)	2 (2%)	**87**

Source: Fieldwork 2025

Item 1 of table 1 Indicates that 49(56.32%) of the respondents strongly agreed with the statement that technological enhancement that brings new era for small businesses. 26(29.89%)4(4.60%) were undecided, 5(5.7%) disagree that technological enhancement that brings new era for small businesses while3(3.44%) of the respondents strongly disagreed with the statement.

Item 2 of the table 1 states that new product introduction satisfy customers and shareholders. 52 (59.77%) strongly agreed with the statement, 19(21.84%) agreed, 5(5.57%) were undecided, 6(6.89%) disagreed that new product introduction satisfy customers and share holders while 5(5.57%) strongly disagreed with the statement.

In item 3 of the table 1: 30 (34.48%) of the respondents strongly agreed that using a new process that decrease negative environmental impact, 43(49.43%) agreed, 7(8.05%) were undecided, 5(5.75%) disagreed while 2(2.30%) strongly disagreed that that using a new process that decrease negative environmental impact.

In item 4 of the table 1: 25(29%) of the respondents strongly agreed that eco-innovation is the advancement of product, service, and process, which leads to sustainability, 50 (57%) agreed, 5 (6%) were undecided, 4(5%) disagreed while 3

(3%) strongly disagreed eco-innovation is the advancement of product, service, and process, which leads to sustainability

Item 5 of table 1 Indicates that 35(40%) of the respondents strongly agreed that education mentoring impact positive skills in small and medium enterprise. 39(45%) agreed, 2(2%) were undecided,7 (8%) disagree while 4(5%) strongly disagreed that education mentoring impact positive skills in small and medium enterprise

Item 6 of the table 1 states that employees of small and medium enterprises gain competencies through mentorship. 50 (58%) strongly agreed with the statement, 25(29%) agreed, 5(5%) were undecided, 4(5%) disagreed while 4 (5%) strongly disagreed that employees of small and medium enterprises gain competencies through mentorship

In item 7 of the table 1, 55(14.29%) of the respondents strongly agreed that mentors can help to carry out a SWOT in order determine future businesses, 21(24%) agreed, 4(5%) were undecided, 5(6%) disagreed while 2(2%) strongly disagreed that mentors can help to carry out a SWOT in order determine future businesses

In item 8 of the table 1, 44(51%) of the respondents strongly agreed that mentoring can support sustainable development by allowing SMEs to acquire knowledge from internal and external sources, 33 (38%) agreed, 3(3%) were undecided, 3(3%) disagreed while 4(5%) strongly disagreed that mentoring can support sustainable development by allowing SMEs to acquire knowledge from internal and external sources

Item 9 of table 1 Indicates that 32(37%) of the respondents strongly agreed government can come up with policies that can boost and support the growth.46(53%) agreed, 3(3%) were undecided, 5(6%) disagree while 1(1%) strongly disagreed that government can come up with policies that can boost and support the growth

Item 10 of the table 1 states that government can hinder SME firm performance when it introduces policy which can restrict the autonomy, as well as the entrepreneurial freedom of some variety

. 60 (69%) strongly agreed with the statement, 20(23%) agreed, 1(1%) were undecided, 3(3%) disagreed while 3 (3%) strongly disagreed that government can hinder SME firm performance when it introduces policy which can restrict the autonomy, as well as the entrepreneurial freedom of some variety

In item 11 of the table 1, 35(40%) of the respondents strongly agreed that policies can cause a substantial impact on the competitiveness among SME, 42(48%) agreed, 2(2%) were undecided, 4(5%) disagreed while 4(5%) strongly disagreed that policies can cause a substantial impact on the competitiveness among SME

In item 12 of the table 1, 31(36%) of the respondents strongly agreed that performance of SMEs is thus vigorously laid low by government policies, 47 (54%)

agreed, 1(1%) were undecided, 4(5%) disagreed while 2(2%) strongly disagreed that performance of SMEs is thus vigorously laid low by government policies

Table 2a Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.935[a]	.875	.873	.39755	.546

a. Predictors: (Constant), Innovation and research development
b. Dependent Variable: sustainability of small and medium scale

Table 2b ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.670	1	93.670	592.685	.000[b]
	Residual	13.434	85	.158		
	Total	107.103	86			

a. Dependent Variable: sustainability of small and medium scale
b. Predictors: (Constant), Innovation and research development

Table 2c Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.052	.080		-.648	.519
	Innovation and research development	.913	.038	.935	24.345	.000

a. Dependent Variable: sustainability of small and medium scale

r = .935
r^2 = .875
F = 592.685
T = 24.345
DW = .546

The regression sum of squares (93.670) is greater than the residual sum of squares (13.434) and this indicates that more of the variation in the dependent variable is explained by the model. The significance value of the F statistics (0.000) is less than

0.05, which means that the variation explained by the model is not due to chance. The significance of the F value indicates that the model statistically significantly predicts the outcome variable.

The correlation coefficient r has a value of 0.935 and this indicates that there is a strong positive relationship between innovation/research development and sustainability square the coefficient of determination, shows that 87.5% of the variation in sustainability is explained by the model.

In the linear regression model, a low error of estimate with a value of 0.39755 is indicated. A value of 0.546 for the Durbin Watson statistics which is less than 2 indicates that there is no correlation.

The innovation/research development coefficient of 0.935 indicates a positive significance innovation/research development and sustainability, which is statistically significant (t = 24.345). Therefore, the null hypothesis should be rejected and the alternative hypothesis accordingly accepted thus. Innovation/ research development significantly affect sustainability.

Table 3a Descriptive Statistics

	Mean	Std. Deviation	N
Mentorship education	1.5402	1.02077	87
Sustainability	1.8161	1.32532	87

Table 3b Correlations

		Mentorship education	Sustainability
Mentorship education	Pearson Correlation	1	.925**
	Sig. (2-tailed)		.000
	N	87	87
Sustainability	Pearson Correlation	.925**	1
	Sig. (2-tailed)	.000	
	N	87	87

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

The descriptive statistics of Mentorship education and Sustainability, shown in Table 3.a. The table shows a mean response of 1.5402 and standard deviation of 1.02077 for Mentorship education and a mean response of 1.8161 and standard deviation of

1.32532 for Sustainability and number of respondents 87. A close examination of the standard deviation values reveals a significant difference in the scores of the two variables. This implies that the variability of data points between the dependent and independent variables is about the same.

Table 3b displays the Pearson correlation coefficient for mentorship education and Sustainability. The correlation coefficient shows a value of 0.925. This value indicates that correlation is significant at 0.05 level (2tailed) and implies that there is a strong positive relationship between Mentorship education and Sustainability (r = .925). The computed correlation coefficient is greater than the table value of r = 0.196 with 85 degrees of freedom (df. = n-2) at alpha level for a two-tailed test (r = .925, p< .05). As a result, since the computed r = .925, is greater than the table value of 0.196. We reject the null hypothesis and concluded that there was a significant positive relationship between Mentorship education and Sustainability (r =. 925, P<.05).

Table 4a Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.819[a]	.671	.667	.72574	.280

a. Predictors: (Constant), Government policy

b. Dependent Variable: Sustainability

Table 4b ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91.185	1	91.185	173.126	.000[b]
	Residual	44.769	85	.527		
	Total	135.954	86			

a. Dependent Variable: Sustainability

b. Predictors: (Constant), Government policy

Table 4c Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.190	.160		1.190	.237
	Government policy	1.042	.079	.819	13.158	.000

a. Dependent Variable: Sustainability

r = .819
r^2 = .671
F = 173.126
T = 13.158
DW = .280

The regression sum of squares (91.185) is greater than the residual sum of squares (44.769) and this indicates that more of the variation in the dependent variable is explained by the model. The significance value of the F statistics (0.000) is less than 0.05, which means that the variation explained by the model is not due to chance. The significance of the F value indicates that the model statistically significantly predicts the outcome variable.

The correlation coefficient r has a value of 0.819 and this indicates that there is a strong positive relationship between government policy and sustainability square the coefficient of determination, shows that 67.1% of the variation in sustainability is explained by the model.

In the linear regression model, a low error of estimate with a value of 0.72574 is indicated. A value of 0.280 for the Durbin Watson statistics which is less than 2 indicates that there is no correlation.

The government policy coefficient of 0.819 indicates a positive significance government policy and sustainability, which is statistically significant (t = 13.158). Therefore, the null hypothesis should be rejected and the alternative hypothesis accordingly accepted thus government policy significantly affect sustainability

Summary of Findings

- The findings at the end of this study include the following
- Innovation and research development have significant positive effect on sustainability of small and medium scale enterprises in Enugu State (r = .935; F= 592.685; t= 24.345; p< 0.05).
- There was a positive relationship between mentorship education and sustainability of small and medium scale enterprises(r =. 925, P<.05).
- Government policy had a significant effect on sustainability of small and medium scale enterprises (r = .819; F= 173.126; t= 13.158; p< 0.05).

Conclusion

The study concluded that entrepreneurship as the main driver of economic growth, entrepreneurship education programs have been created to provide business skills, competencies, and entrepreneurial mindset. Entrepreneurship study programs must satisfy modern needs and comply with the current peculiarities of the business-creation process, such as turning towards green business, environment protection, circular economy, and sustainable development. Government policies help to

establish conditions for boosting environmentally friendly entrepreneurship. The need for development through entrepreneurship has to be balanced with the need to preserve the opportunity for future generations to reach and enjoy a high quality of life and to sustain the environment.

Recommendations

Based on the findings of this study and the conclusions, the following recommendations were

- Small and medium scale enterprises should embark on research development programme that will give birth to innovation and advance them in technology which promote business sustainability
- Small and medium scale enterprises should encourage the use of mentorship education, in order to ensure that expertise skills and knowledge are transfer from the mentor to their mentee, which in a long run improve the profitability index of the firms
- Government should always make policies and regulations that encourage operations of small and medium scale enterprises to compete favorably in market, and sustain economic growth of their country

References

1. *Alwakid, W.; Aparicio, S. & Urbano, D. (2021) the influence of green entrepreneurship on sustainable development in Saudi Arabia: The Role of Formal Institutions Int. J. Environ. Res. Public Health, 18 (5) 67.*
2. *Bossle M.B, de Barcellos M.D, Vieira L.M, & Sauvée L (2016) the drivers for adoption of eco-innovation. J Clean Prod 113.*
3. *Cassiman B, & Veugelers R (2006) In search of complementarity in innovation strategy: internal R & D and external knowledge acquisition. Manag Sci 52(1):68–82.*
4. *Dale, G. (2015). Origin and delusion of green growth. International Socialist Review, 2(97), 1-5. Retrieved on 23/06/2019 via. www.isreview.org.*
5. *Demuth, A. (2014). Green entrepreneurship: A promising path towards a sustainable future in Tunisia and elsewhere. Internationale Zusammenarbeit (GIZ) GmbH, 4-51.*
6. *Dyllick, T. & Hockerts, K. (2002) 'Beyond the business case for corporate sustainability', Business strategy and the environment, 11(8).130–141.*
7. *Ebo T, & Simona M (2017) Prospects of Green entrepreneurship as a driver for sustainable and inclusive economic growth in rural Ghana, 20th International Scientific Conference "Enterprise and Competitive Environment", March 9–10, 2017, Brno, Czech Republic.*

8. *Esty, D. C., & Winston, A. S. (2009). Green to gold: how smart companies use environmental strategy to innovate, create value, and build competitive advantage. Journal of building and Engineering, 2(5), 1-13.*
9. *Gibbs, D (2009), 'Sustainability entrepreneurs, ecopreneurs and the development of a sustainable economy', Greener Management International, 55(7) 63–78.*
10. *Green Project (2012).An attempt to define green entrepreneurship. NCCR Policy Brief, 6(1), 1-3. greentproject.eu. entrepreneurship.pdf Retrieved 16/6/19.*
11. *Hörisch, J., Kollat, J., & Brieger, S. A. (2017). What influences environmental entrepreneurship? A multilevel analysis of the determinants of entrepreneurs' environmental orientation. Small Business Economics, 48(1), 47–69.*
12. *James, P (1997) the sustainability cycle: a new tool for product development and design. J Sustain Prod Des 2: 52–57.*
13. *Jones, G & Gettinger, B. (2016). Alternative paths of green entrepreneurship: The environmental legacies of the North Face's Doug Tompkins and Patagonia's Yvon Chouinard. Harvard Business School Working Paper, 10(1), 17-34.*
14. *Khan, M. (2015). Green human resource management – A prerequisite for sustainable environment. Progress in Science and Engineering Research Journal, 18(3), 1-7.*
15. *Kulkarni, P., V., & Pammar, L., S. (2019).A comparative study of rating systems in green building. Journal of Engineering and Technology, 6(4), 1.3*
16. *Man, M. &Macris, M. (2015) 'Integration of corporative governance into organisation social responsibility system', Polish Journal of Management Studies, 11(2).100–114*
17. *Onyedikachi, N. J., Clement, M., & Funmilayo, A. K. (2022).The impact of government policies and small scale enterprise development activities on economic growth evidence from Nigeria. International Journal of Academic Research in Business and Social Sciences, 12(12), 775 – 802.*
18. *Porter, M. E., & van der Linde, C. (1995).Toward a new conception of the environment competitiveness relationship. Journal of Economic Perspectives, 9(4), 97–118.*
19. *Rennings K (2000) Redefining innovation eco-innovation research and the contribution from ecological economics. Ecol Econ 32(2):319–332.*
20. *Tien, N.H. & Anh, D.B.H. (2018) 'Gaining competitive advantage from CSR policy change: case of foreign corporations in Vietnam', Polish Journal of Management Studies, 18(1), 403–417.*
21. *Tien, N.H. & Anh, D.B.H. (2019a) 'Ecological aspect of sustainable development of rural areas', International Journal of Research in Finance and Management, 2(2).5–7.*