International Journal of Maritime and Interdisciplinary Research
©2025 IJMIR/Volume 7(3) SE (1) | ISSN: 2734-3286.

Journal homepage: www.ijmir.edu.ng

BLUE ENTREPRENEURSHIP AND SUSTAINABLE MARITIME BUSINESS IN NIGERIA

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Abstract

The studies on sustainability have grown significantly over the years. It is tied to the gross environmental degradation. Also there are remedial efforts by the United Nations with its Sustainable Development Goals, the Blue economy initiative of World Bank; and the new Ministry of Blue economy, Nigeria. Despite research on Global Warming are numerous, the climate problem persists. As a result of the persistent pollution and rising water temperatures currently at 0.36°F. In the light of this awareness, the research gap is that, little attention is been given to small maritime entrepreneurs hit with high operational cost and boat accidents. Therefore, the concept of "blue entrepreneurship" is examined to attain sustainable development at that level. The Research design was mixed as a cross-sectional, narrative and deductive research. The study population comprise 1019 maritime entrepreneurs (Marketers, Fishers, Boat builders and Transporters) in selected riverine communities and markets in Warri, Yenagoa, and Port Harcourt. The sample size of 287 was generated using the Krejcie and Morgan (1970) table and Taro Yamane Formular (1973). However, the total number of respondents with completed and usable questionnaire was 241. This number was justified by Roscoe (1975) Rule of thumb as appropriate. For data analysis, SPSS 25.0 was employed. In results and discussions, it was revealed that maritime entrepreneurs can equally play part in ensuring clean waters, aquatic life and profit. As conclusion and recommendations, the study presented ways to mitigate the issues and spur future

studies; one honourable mention, is the need to collaborate with industry leaders, researchers, and government to subsidize sustainable practices.

Keywords: Blue Entrepreneurship; Small-scale Maritime Entrepreneurs; Sustainable Maritime Business; Environmental Sustainablity; Economic Sustainability

1.0 INTRODUCTION

Sustainable maritime business can be defined as any enterprise that considers preservation of the riverine environment, economy, and general society when operating (Meghla et al., 2024). Apparently, researchers have called for future studies on definitive sustainable practices that could turn around the challenges faced by stakeholders in the Nigerian Maritime industry (Olaniyi, 2024). The modern infrastructures, and growing population on the islands represent civilisation. Whereby the marine resources including that of Nigeria, are sources of food without being planted and sown. By so doing, the Maritime industry uniquely meets the needs of many, as means of mobility, a source of cultural heritage, an identity, sport and economic growth (Onah & Nwankwo, 2023).

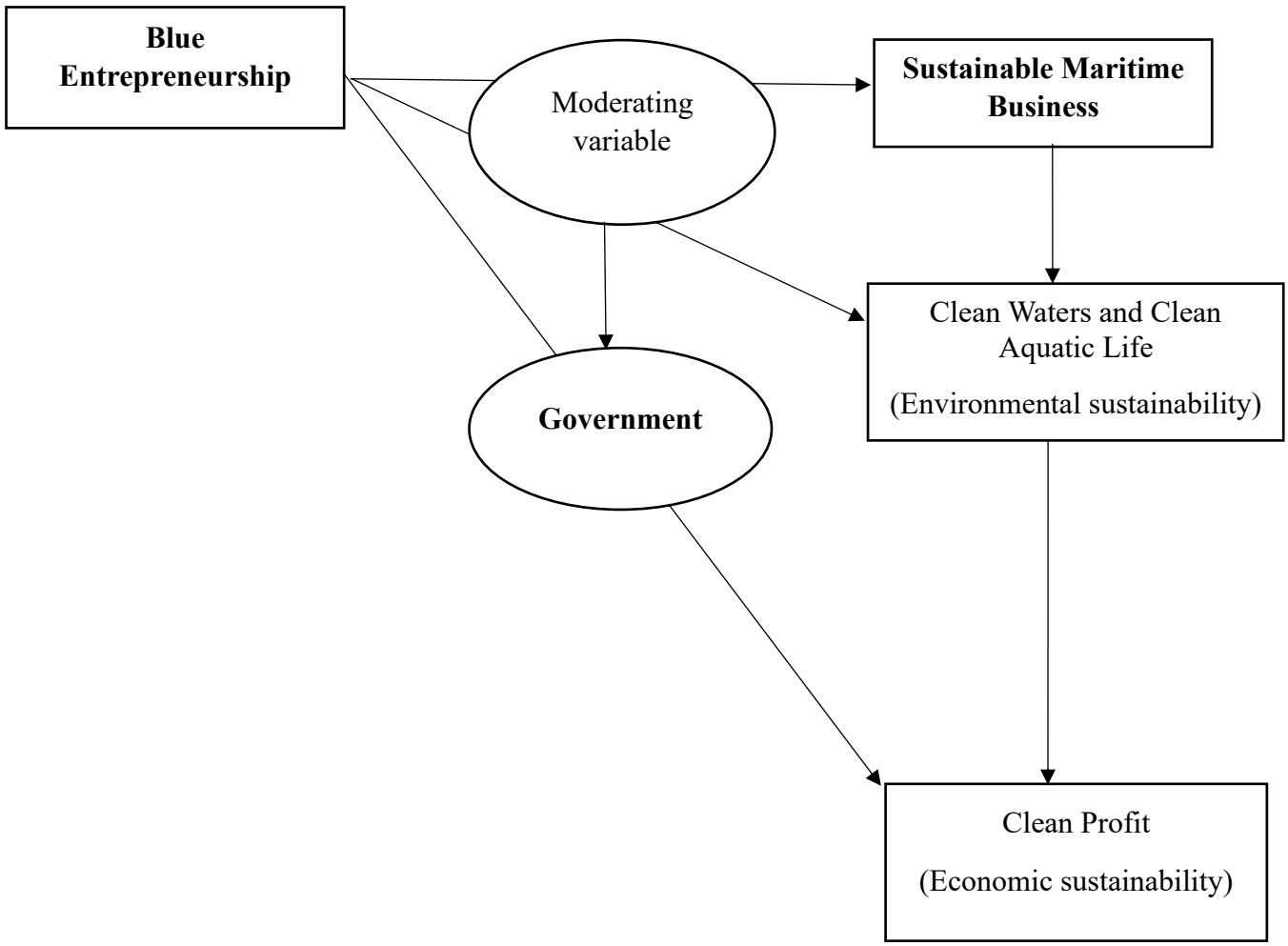
However, climate crisis, natural disasters, and maritime incidents have become frequent and severe. Relative to the daily environmental degradation, around 66.3 million people still lack access to potable water supply. There is poor mobile network coverage, unstable and unsustainable power supply via diesel powered plants. The lack of access to quality medical care amongst others, has negatively affected the quality of life of riverine dwellers (Anikwe et al., 2024). Nonetheless, the rise in socio-industrial activities in the coastal towns, is at the forefront of sustainability debates (UNEP, 2024). The need for a sustainable coping mechanism at the local level today, as informed the study of the concept ‘blue entrepreneurship’. It emphasizes the activities of the small maritime entrepreneurs. These stakeholders are not adequately represented in past researches (Olaniyi, 2024).

The fundamental problem is non-sustainability with regards to small-scale maritime businesses in Nigeria. Numerous studies are on pollution by Multinationals (Oil firms). However, unsustainable local fishing and trading are also prevalent. Hence, the problem facing the maritime industry is multifaceted. Essentially, the occupational behaviour of small maritime entrepreneurs are also problematic.

For example, the unethical use of formalin as preservative, the fishing and selling of the highly toxic Tilapia fish; The patronage of products of bunkering for cheap fuel, aids and abates pipeline vandalism. Unchecked coastal developments and unregulated dredging are on the rise. There is problem of overwhelming increase in population and water trips, overloading, reckless driving, increase in unlicensed, and inexperienced boat operators. No fewer than 452 people lost their lives in boat accidents between July and December, 2024 (UNEP & Human Angle Research, 2024). These risk factors lead to more boat incidents and overrun of local fish nets; There is problem of increase in disposal of plastics, and uncontrolled timber lumbering, many but to mention few.

Also, there is problem of an increasing social inequality including the lack of sustainability studies for marginalized groups, such as women, small-scale fishers, boat builders and traders. These group of maritime entrepreneurs lack fair access to blue economy opportunities and manpower training programmes. Apart from the unsustainable compensation for livelihood damages, there are no sustainable government support. The small entrepreneurs are facing difficulties in elevating to the level of industrial fishers and exporters of marine resources. Many of them rely on small canoes and direct smoking, and other unhealthy methods of seafood drying and preservation.
The enhancement of transporters' service delivery is also lacking. There are minimal remediation projects for removal of water hyacinth. These problems disrupt the known free flow of water transport. They also endanger the lives and properties of water transport users. Academically, there is insufficient collaborative research between natural scientists, social scientists, and policymakers to address the complex challenges. Again, the realisable coping mechanisms for the above mentioned problems have informed this study. The study's scope includes operational framework, narrative literature review including theoretical, conceptual and empirical review. Complementarily, a primary study is also conducted with some maritime entrepreneurs, as recognition of stakeholders in local transportation, fishing and marketing.

Fig. 1: ***Conceptual / Operational Framework***



Source: Conceptualised by the Researcher (2024)

2.0 Literature Review

Theoretical framework

Stakeholder Theory

Edward Freeman created the stakeholder theory in 1984. It states that any individual or group of individuals interested in or impacted by a business's operations is considered a stakeholder (Freeman & Evan, 1990). There are inside and outside stakeholders. The internal groups include employees, shareholders, creditors, consumers, suppliers, while the external groups include government, investors, local communities, political parties, environmental agencies, non-governmental organisations, the media, and financial institutions etc. According to the stakeholder theory, a business must take into account and meet the demands of all the individuals and groups (stakeholders) that may be affected by the business operations (McVea & Freeman, 2005).

Stakeholder theory is applied in maritime studies to analyse any group that has a stake in maritime business operations. According to the stakeholder theorist Freeman (1984), we are all parties that may be impacted in some way by maritime commercial operations, which could have positive or negative effects. The necessity of identifying and taking into account all those impacted by maritime operations is thus emphasized by this theory. These individuals include shipping companies and crew members, port authorities, the government, maritime regulatory agencies, civil societies, fishermen, coastal communities, and small maritime entrepreneurs who operate boats and market maritime resources.

Environmental Economic Theory

Kenneth Boulding created the environmental economic theory in 1966. According to the environmental economic theory, seeking economic development may affect the ecosystem and natural resources. It describes the costs and advantages of human economic activity (Kiran, 2024). According to the notion, there is always a cost associated with any human endeavor that is undertaken in order to make a living and it is imperative that the potential effect is moderated (Meghla et al., 2024).

In this sense, the theory's application to the discussion topic suggests that when maritime companies continue to use unsustainable methods for their transportation, fishing, and oil exploration operations, the environment suffers from higher pollution levels and a larger carbon footprint (Habip & Dogan, 2022). The underground encouragement and facilitation of bunkering through transportation and patronage, the disposal of used plastics and untreated sewage, into the waters, can all lead to an unsustainable maritime industry, especially for maritime entrepreneurs. The need to adhere to and find a balance between accomplishing financial goals and protecting the environment is also underlined by environmental economic theory (Mitra & Pattanaik, 2024).

2.1 Conceptual Review

Blue Economy

At the 2012 Rio de Janeiro United Nations Sustainable Development Conference, a novel subject was covered: the blue economy (UNEP, 2024). The blue economy concept aims to achieve the circular economy and green economy's environmental objectives. In order to establish a robust marine ecosystem, the blue economy places a high value on sustainability management (Anikwe et al., 2024).

According to Olaniyi (2024), the Blue Economy is a sea-based economic development that significantly reduces environmental risks and ecological scarcity, while improving human well-being and social equity. The value chains of the blue economy are made up of all commercial endeavours associated with the sea and ocean. Rather than being called the blue economy, this economic activity is also called the ocean economy in the literature (Brodd, 2022). The United Nations specifically refers to its research in this area as the ocean economy. Furthermore, the blue economy concept for a sustainable economy is used to manage water resources within the borders of European nations. However, this is acknowledged as step in the right direction as been introduced to Africa (Onah & Nwankwo, 2023).

Blue Entrepreneurship

Blue entrepreneurship is a business concept that is cut out of same cloth as the concept of blue economy. The paper "Towards an Integrated Participatory Marine/Coastal And Territorial Spatial

Planning Approach at The Local Level" by Panagou, Kokkali, and Stratigea (2018) introduced the concept of blue entrepreneurship. The scholars postulated that it involves the inclusive of development of maritime entrepreneurs for sustainable maritime business.

Concurrently, Smith-Godfrey, (2016) defines blue entrepreneurship as any type of economic activity that promotes the growth of the blue economy with the goal of maintaining and promoting sustainability in the management of the small –scale maritime sector. Determining the extent of the maritime field is crucial in this regard. There are two ways to approach the maritime field: either narrowly, within the context of maritime transportation and/or fishing, or broadly, encompassing marine ecology and the marine environment (Crecente et al., 2021). Literally, there are few studies on the concept of blue entrepreneurship. In this sense, most sustainable marine entrepreneurial endeavours are categorised as blue entrepreneurship.

It seems that the ideas of blue and green entrepreneurship are complementary to one another and evolve in the same direction. But compared to the research on green entrepreneurship, the blue entrepreneurship literature is more focused on theoretical approaches that considers the maritime business aspect as part of sustainability studies (Habip & Dogan, 2022). Conversely, these studies permit the establishment of smaller entities under the sustainable umbrella (UNEP, 2024).

Meghla et al. (2024) argues that to promote the aquatic ecosystem and increase public knowledge of the seas and oceans, a conceptual framework is necessary. Furthermore, blue entrepreneurship needs to be widely inclusive. Pertaining to the preservation and restoration of marine life as well as access to clean, high-quality water (Crecente et al., 2021). The European Union's strategic documents list it as one of the sectors of sustainable development (European Commission, 2021). For clean energy and water resources, people and communities should look to blue entrepreneurship (Brodd, 2022).

Sustainable Maritime Business

Hans Carl von Carlowitz was the first to establish the term sustainability in 1712 (Brodd, 2022). Nonetheless, the 1980s saw the concept's broad development and emergence as a multidisciplinary identity. The notion of sustainability has been broadened in this context to include, sustainable

maritime business. This bridges the gap between economic progress and environmental sustainability.

Measures of Sustainable Maritime Business

Environmental sustainability (clean waters and clean aquatic life)

Environmental sustainability is essential to economic success (Kiran, 2024). It is considered as the proactive steps businesses take to reduce their ecological footprint as they become more aware of how their activities affect the environment (Olaniyi, 2024). Businesses may help the environment while simultaneously saving money and improving their reputation by embracing eco-friendly production methods and renewable energy sources (Meghla et al., 2024). Commitments to a sustainable future for future generations is linked to environmental sustainability (UNEP, 2024). In Nigeria, high water contamination rates pose a serious threat to public health. Water bodies in Nigeria are severely contaminated by untreated sewage, solid household garbage, including used plastic bottles.

Approximately 91% of the nation's water is contaminated with E. Coli, a significant prevalence. Particularly in heavily populated coastal settlements like Makoko, Iwaya, Ilaje, Amukoko, Okobaba, Ijora Oloye, and Ogudu Village in Lagos, as well as Andoni, Bundu, Captain Amangala, Emenike, Marine Base, and Rex Lawson in Port Harcourt, water pollution is severe in metropolitan areas. In Nigeria, solid waste management is becoming more and more of a problem. According to the National Bureau of Statistics (NBS), Nigeria's annual household trash production was predicted to be approximately 36 million tonnes (0.50 kg/capita/day) in 2029 (UNEP, 2024).

In the Niger Delta, waste is disposed of carelessly. However, with the absence of recycling plants, the presence of designated dumping sites, generates significant volumes of greenhouse gases, pollute the air, land, and water, and endanger human health (UNEP, 2024). In relation to the topic in discourse, the primary causes of water pollution are inclusive of petroleum compounds from oil spills. The minimal remediation projects for removal of water hyacinth, disrupts the free flow water transportation, which endangers the lives and properties of boat operators and passengers (Onah & Nwankwo, 2023).

Economic sustainability (making clean profit)

Economic sustainability is based on the pursuit of profit, which is a key driver of business growth and stability (Anikwe et al., 2024). However, the 3ps model pushes companies to redefine success by taking into account not only financial gains but also the ethical and social implications of their operations. Sustainable profit involves ethical supply chain management, fair labour practices, and responsible business practices (Kiran, 2024). By balancing financial success with ethical principles, companies can both ensure their long-term profitability and have a positive social impact (Onah & Nwankwo, 2023).

A strong and sustainable company is based on people who are involved and empowered both inside and outside. The 3Ps model's People component emphasizes how crucial it is to create an environment where diversity, equity, inclusion, and worker well-being are given top priority (Brodd, 2022). Important measures towards achieving economic sustainability include paying fair salaries, encouraging work-life balance, and investing in professional growth (Crecente et al., 2021). Additionally, by funding social, medical, and educational activities, business owners can make an impact that goes well beyond the workplace. At the local level, action is not moving at the rate or scale necessary to achieve Goal 14, there is more to do to assist small-scale fisherman, to discourage unreported, unregulated fishing. Also to eradicate illicit profit from transporting contrabands, overloading people and cargo boats (Habip & Dogan, 2022).

In order to secure economic sustainability, global response must be fast and well-coordinated to protect the planet's greatest ecosystem. This means boosting financing for ocean science, stepping up conservation efforts, developing nature-based solutions, addressing the effects of human-induced hazards, and to quickly reverse climate change.

Response by Government and Relevant Agencies

Many international organisations and countries have started to take the concept of sustainability into consideration as a result of the active environmental movements. This is an example of the concept of sustainability being used as a "border term" that lies between politics and science (Crecente et al., 2021).

According to United Nations Committee on Sustainable Development, Oceans, seas, and inland water resources are considered in relation to the sustainable development goals (SDGs), even as water is portrayed as the foundation of sustainable development (UNEP, 2024). In accordance, with the fight against poverty and social public health, the Nigerian Government has constituted the Ministry of Blue economy (Olaniyi, 2024). Apparently, the investment for comprehensive management of Ocean and water resources is ongoing (UNEP,2024). However, keen focus on blue entrepreneurship towards the business activities in the inland waterways, is limited to damage compensation (Anikwe et al., 2024). The advocacy for sustainable practices by small maritime operators, is still inactive (Meghla et al., 2024).

Empirical Review

Relevant empiricals

Onah and Nwankwo (2024), researched on people and sustainable development. The paper focused on safeguarding and maintaining Nigeria's water resources. Data for their study came from secondary sources using a qualitative survey research methodology. Nigerian governments have taken some bold measures to protect, provide, and sustain water resources in Nigeria, according to the results of a content analysis of the data collected. However, these efforts are not truly designed and/or implemented, as they have not produced significant results in terms of protecting, providing, and sustaining the water bodies or making clean water available, affordable, and accessible.

Kiran (2024); examined the topic of "Navigating Waves of Innovation: Unveiling Female Entrepreneurship in Coastal Marine Tourism". This study carried out a qualitative analysis to gain a better understanding of the complex dynamics of female entrepreneurship in the marine tourism industry along coasts. The main goal was to raise awareness of the important role women entrepreneurs play, the difficulties they encounter, and the creative solutions they use to succeed in this cutthroat industry was the aim. The qualitative study included snippets from ten relevant papers including NVivo software.

Numerous investigations were conducted, including word cloud analysis, tree maps, hierarchy charts, word frequency analyses, and cluster analysis. Important implications were drawn from the

thorough qualitative study's findings. Words like "women," "tourism," "social," and "family" were commonly used to highlight the importance of women in coastal business and the complex interplay of social dynamics. The terms "lack," "support," and "opportunities" highlighted the difficulties and opportunities faced by female-owned maritime tourism businesses. As a result, the qualitative study offered important new insights into the complex realm of women's entrepreneurship in coastal tourism. These findings pave the way for additional study.

Mitra et al. (2024) conducted an exploratory study on Indian marine engineers. They examined the relationship between personality traits and entrepreneurial attitude through the mediation of entrepreneurial alertness. Numerous studies, have shed light on the mediation effect of entrepreneurial alertness on the relationship between personality traits and entrepreneurial attitude among university students.

Convenience sampling was used in this study to collect data from practicing Indian marine engineers in order to create connections between these characteristics. The lack of official channels for fostering an entrepreneurial mindset among Indian marine engineers is the root cause of research concern. According to this report, governmental interventions should be reformed in order to formalise investment opportunities for marine engineers and so boost the blue economy's growth rates in India.

Meghla et al. (2024) assessed the impact of cluster-based blue entrepreneurship and blue technology penetration on seaweed export propensity was investigated in their study, Sea of Opportunities. Utilizing data from a survey of 233 seaweed producers, with non-probability snowball sampling. Partial least square structural equation modelling (PLS-SEM) was used to analyse the data that was gathered. The results show that export propensity is positively impacted by cluster-based blue entrepreneurship. The study, however, finds no evidence to establish the link between blue technology penetration and cluster-based blue entrepreneurship.

Anikwe et al. (2024) investigated Human Capacity Development (HCD) and Sustainable Growth in the Blue Economy: Opportunities, Challenges, and Strategies for Nigeria. The prospects, difficulties, and long-term growth plans of HCD in Nigeria's blue economy were the main topics of this study. In demonstrations of the theoretical foundations, this study used a qualitative

approach that included review of the literature. Books, journal papers, and other pertinent materials were among the many data sources that were consulted for the review. According to the study's findings, HCD in Nigeria's blue economy offers a chance to close the skills gap in the nation by giving people the education and training. Numerous obstacles to HCD in Nigeria were also noted by the study, such as a lack of cooperation among stakeholders, insufficient money, and restricted access to high-quality education and training.

Olaniyi et al. (2024) conducted a thorough analysis of the impact of blue economic practices and their possible ramifications on Nigeria's socioeconomic development. According to the report, Nigeria, a coastal country with an abundance of marine resources, has realized how important it is to use its maritime potential to boost economic growth. The study examines these sectors' economic, social, and environmental facets, taking into account both their advantages and disadvantages. The results show that Nigeria's economic growth and development might be greatly aided by the blue economy.

For example, it stated that the fishing industry can provide food security, create jobs, and increase foreign exchange profits through exports. However, the sustainability of Nigeria's blue economy is seriously threatened by issues including pollution, overfishing, and poor infrastructure. In light of the results, the study suggests that in order to optimise financial gains and protect marine ecosystems, Nigeria should give priority to sustainable blue economy practices. Improve coastal areas in Nigeria, reduce poverty, and support sustainable growth. Nonetheless, the success of Nigeria's blue economy depends heavily on prudent planning, capable leadership, and efficient resource management.

Research Gaps

There is a handful of oversees studies on blue economy and blue entrepreneurship but very little research on the concept of blue entrepreneurship in Nigeria. There is minimal attention on the maritime entrepreneurs and their business activities.

Hypotheses

H_1: blue entrepreneurship is negatively related to environmental sustainability (clean waters and clean aquatic life).

H_2: blue entrepreneurship is negatively related to economic sustainability (clean profit)

H_3: government support is negatively related to blue entrepreneurship and sustainable business

3.0 Methodology

The Research design was mixed comprising cross sectional, narrative and deductive research methods. The data was collected via self-administered questionnaire adapted from previous studies. The sampling technique was purposive; The study population comprise 1019 maritime entrepreneurs plying their trade in selected riverine communities and waterfront markets in Warri, Yenagoa, and Port Harcourt.

From the above population size of 1019, the Pre-field study sample size of 287 was generated using Krejcie and Morgan (1970) table and Taro Yamane Formular (1973). The sample size was equally justified as reliable and valid by the rule of thumb followed by existing studies and; according to the Taro Yamane formular below:

Equation 1: Taro Yamane Formular

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

N = Population of study

K = Constant (1)

e = degree of error expected

n = sample size

Therefore;

Population of study: 1019

Degree of Error expected: 0.05

$$n = \frac{1019}{1 + 1019\ (0.05)^2}$$

$$n = 287.24453840732906 = 287$$

From the above calculations, the sample size for this study is 287, but the total number of duly completed responses was 241. Roscoe (1975) Rule of thumb states that a sample size greater than 30 and less than 500 is suitable for behavioural studies. On this note, our study is in order as it is poised, to investigate whether the behaviour of maritime entrepreneurs are sustainable or non sustainable. Hence the opinions and characteristics of the 241 respondents is deemed a true representation of the whole population.

Data Analysis

Table 1: Questionnaire Distribution and Return Rate Analysis

	Frequency	**Percentage**
Copies of Questionnaire distributed	287	100%
Copies of Questionnaire returned	244	85%
Copies of Questionnaire not returned	43	15%
Copies of Questionnaire completed but not usable	3	1%
Copies of Questionnaire completed and usable	241	84%

Source: Author's Field Survey (2024)

Table 1 show that out of the sample size of 287, only 244 respondents (85%) filled the questionnaire. Out of the 244 copies filled, only 241 (84%) responses returned were valid and were used for the analysis.

Table 2: Demographic Characteristics of the Respondents

Main Factor	Frequency	Percentage
1. **Gender**		
Male	98	41%
Female	143	59%
Total	241	100%
2. **Age**		
20-29years	45	19%
30-39years	102	42%
40-49years	77	32%
50years and above	17	7%
Total	241	100
3. **Educational qualification**		
No Formal Education	64	27%
Primary	132	55%
Secondary	42	17%
Tertiary	3	1%
Total	241	100

Source: Author's Field Survey (2024)

Gender characteristics of the respondents

Table 2 item 1 show the gender characteristics of the respondents. The respondents comprised more females than male participants. The male participants occupied 41% (98 respondents) of the population, while the female participants occupied 59% of the population. This implies that most maritime entrepreneurs are women.

Age distribution

Table 2 item 2 show the distribution according to the age group of the respondents. It shows that respondents between the ages of 30-39 years occupy a greater percentage of the population, that is 42%, followed by those between 40-49 years that were 32%, then those between 20-29 years were 19%, while those above 50 years had the least percentage of 7%. This implies that most maritime entrepreneurs are between 30 and 49 years of age.

Educational qualification

Table 2 item 3 show the educational qualification of the respondents. The result shows that 55% that is most of the respondents, have primary education, 17% completed secondary education. While 27% admits to no formal educational background. While only 1% indicated having acquired Tertiary education of some sorts. This implies that most of the maritime entrepreneurs have no difficulty responding to questionnaire items, and have sufficient knowledge on what maritime business entails.

4.0 Results and Discussions

The tests for the bivariate hypotheses are carried out, showing analyses of the Blue entrepreneurship and measures of Sustainable Maritime Business. As a rule, path coefficients (β values) of .10 to 0.29 are weak, .30 to .49 are moderate and .50 to 1.0 are strong significance, respectively (Cohen, 1988). The decision rule will be to reject the null hypotheses where $p < 0.05$ significant level and the null hypotheses accepted where $p > 0.05$.

Table 3: Test of hypothesis 1

Null	**Structural Path**			**Path coefficient (β)**	**T-values (t)**	**Level of significance (p)**
H_1	Blue entrepreneurship	→	Environmental sustainability	0.345	8.476	0.000

H_1: blue entrepreneurship is negatively related to environmental sustainability (clean waters and clean aquatic life).

According to the path association analysis in Table 3, there are positive and significant routes between Blue entrepreneurship and environmental sustainability ($\beta = 0.345$, $t = 8.476$, $p = 0.000$). As a result, the study finds a favourable and substantial association between Blue entrepreneurship and environmental sustainability. Therefore, the study rejects the null hypothesis in favour of the

alternate hypothesis that Blue entrepreneurship is positively associated to Environmental sustainability (clean waters and clean aquatic life) in Nigeria.

H_2: blue entrepreneurship is negatively related to economic sustainability of maritime businesses in Nigeria

Table 4: Test of hypothesis 2

Null	Structural Path			Path coefficient (β)	T-values (t)	Level of significance (p)
H_2	Blue entrepreneurship	→	Economic sustainability	0.072	3.776	0.000

Table 4; Path relationship analysis shows that there are positive and significant routes between Blue entrepreneurship and economic sustainability (β= 0.344, t = 3.776, p = 0.000). As a result, the study finds a positive and substantial relationship between blue entrepreneurship and economic sustainability. Therefore, the study rejects the null hypothesis in favour of the alternate hypothesis that Blue entrepreneurship is positively connected to economic sustainability of maritime entrepreneurs.

Table 5: Test of hypothesis 3

Null	Structural Path				Path coefficient (β)	T-values (t)	Level of significance (p)
H_3	Government	→	Blue entrepreneurship	Sustainable maritime business	0.548	8.476	0.000

H_3: Government does not significantly moderate the relationship between Blue entrepreneurship and sustainable maritime business in Nigeria

Following the inclusion of Government in Table 5, a multivariate data analysis was performed using partial correlation to test the moderating effect of Government on the relationship between blue entrepreneurship and sustainable maritime business. The results suggest (β= 0.548, p = 0.000) significance. As a result, the link between blue entrepreneurship and sustainable maritime business is considerably influenced by Government. Therefore, the null hypothesis is rejected, and the alternate is accepted. Hence, we restate that perceived government support significantly moderate the relationship between blue entrepreneurship and sustainable maritime business in Nigeria.

Research Implications

The field study shows that a non-blue entrepreneurship and non-sustainable maritime business practice is detrimental to the wellbeing of the people. In the rise of environmental degradation and boat accidents; The study revealed that most small entrepreneurs have no knowledge of the blue entrepreneurship concept, neither the sustainable maritime business practices and laws guiding fishing, lumbering, trading, etc. Most do not have valid boat driver's licence, and professional training. Therefore, the application of this blue entrepreneurship research will reduce the rate of unsustainable practices and improve clean water supply, aquatic life, and sustainable profit making in Nigeria.

In addition, extant theories reviewed in the study such as the Edward Freeman 'Stakeholder theory', states that, a business must take into account all the individuals (stakeholders) that may be affected by the business operations. This extant theory implies that, the higher the level of blue entrepreneurship application through supportive leadership from government and non-governmental agencies, the lower manifestation of negative practices among maritime entrepreneurs. Secondly, the Kenneth Boulding 'Environmental Economic theory' states that there is always a cost associated with any human endeavor that is undertaken in order to make a living and it is imperative that the potential effect is moderated. This extant theory implies that when the leadership is not supportive and welfare of maritime entrepreneurs' is poor, such intensifies the display of reckless coping mechanisms.

Recommendations

The recommendations flowing from the findings and conclusion reached are:

1. The study finds a favourable relationship between blue entrepreneurship and environmental sustainability. Therefore, Small-scale maritime entrepreneurs should partner with seasoned environmentalists who will help reduce the extent of unsustainable practices and improve the chances of enjoying clean water, aquatic life and sustainable profit.
2. The study finds a positive relationship between blue entrepreneurship and economic sustainability. Therefore, maritime business education should be promoted by all stakeholders, which includes building rapport with industry leaders, and enacting effective empowerment programs to breach the economic gap between the industrial and small maritime operators.
3. The study finds that blue entrepreneurship and sustainable business is influenced by Government. Therefore, there is need to align with government to subsidize sustainable practices, enforce training and licensing of small operators to discourage unsustainable activities.

Contributions to knowledge

1. The study finds that most maritime entrepreneurs are women at a percentage of 59%. In terms of age distribution most are between 30 and 49 years of age. While in terms of educational background, 27% never had any formal schooling. With this insight, the paper recommends that government should launch intervention programmes to develop the capacity of young and middle-aged women.
2. Also, in the review of past literature, the study finds that the concept of blue entrepreneurship is broad and multidisciplinary. In addition, existing studies on blue entrepreneurship research in Nigeria are scanty. Therefore, there is need for more collaborative research between natural scientists, social scientists, and policymakers to address the complex challenges of the blue entrepreneurship economy.
3. This study contributes to the advancement of knowledge on blue entrepreneurship. Most prior research in the literature, have consistently presented a blanket discussion on the subject

matter of blue economy; But this study focused on a specific component, which is blue entrepreneurship that concerns the small maritime entrepreneurs, in a bid to promote sustainability at the local level of the Maritime industry.

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