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**GREEN OCEAN STRATEGY AND ORGANIZATIONAL  
COMPETITIVENESS IN SELECTED MANUFACTURING FIRMS IN  
SOUTH WEST, NIGERIA**

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**Article Received: 11 June 2026, Article Revised: 01 July 2026, Published on: 21 July 2026**

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Doi: <https://doi-doi.org/101555/ijarp.8559>

**ABSTRACT**

This study examined the influence of Green Ocean Strategy on organizational competitiveness in selected manufacturing firms in South West, Nigeria. Specifically, the study investigated the effects of green innovation and eco-efficiency on organizational competitiveness. The study was anchored on the Resource-Based View (RBV), which posits that firms achieve sustainable competitive advantage through valuable, rare, inimitable, and non-substitutable resources and capabilities. A survey research design was adopted, and data were collected from employees of selected manufacturing firms using a structured questionnaire. A total of 332 questionnaires were distributed, of which 268 valid responses were used for the analysis. Descriptive statistics were employed to summarize respondents' opinions, while simple linear regression analysis was used to test the hypotheses at the 0.05 level of significance. The findings revealed that green innovation has a strong positive and significant influence on organizational competitiveness ( $R = 0.830$ ,  $R^2 = 0.688$ ,  $\beta = 0.830$ ,  $p < 0.05$ ). Similarly, eco-efficiency was found to have a strong positive and significant influence on organizational competitiveness ( $R = 0.833$ ,  $R^2 = 0.694$ ,  $\beta = 0.833$ ,  $p < 0.05$ ). The study concluded that Green Ocean Strategy, through green innovation and eco-efficiency, significantly enhances organizational competitiveness by improving operational efficiency, reducing environmental impacts, and strengthening firms' competitive positions. The study recommends that manufacturing firms should invest in green technologies, strengthen eco-

efficient production systems, and integrate sustainability into their strategic planning to achieve long-term competitiveness.

**KEYWORDS:** Green Ocean Strategy, Green Innovation, Eco-efficiency, Organizational Competitiveness, Manufacturing Firms, South West Nigeria.

## INTRODUCTION

In today's competitive and sustainability-driven business landscape, organizations are increasingly challenged to balance profitability with environmental stewardship and social responsibility. Traditional strategies that focus solely on outperforming competitors often result in resource depletion, environmental degradation, and declining long-term competitiveness (Hart and Dowell, 2021). As stakeholders, regulators, and consumers demand sustainable practices, businesses are compelled to rethink their strategic approaches to remain relevant and competitive. The business environment in this 21st century is characterized with global ideal, dynamic and complex business philosophy with different organizational culture (Akpaetor, Emerole & Okebaram, 2024).

Green Ocean Strategy (GOS) has emerged as a complementary concept to the blue ocean strategy. While the green ocean strategy focuses on creating uncontested market spaces and redefining value through innovation (Kim and Mauborgne, 2021), the green ocean strategy extends this by integrating sustainability, environmental consciousness, and social equity into strategic thinking. It emphasizes creating eco-innovations, environmentally friendly market spaces, and sustainable consumption patterns that generate value for both businesses and society (George *et al.*, 2022; Park *et al.*, 2023). The green ocean strategy (not to be confused with its environmental name sake), is a hybrid mechanism which combines the best things that characterize blue ocean and red ocean strategies. The keyword is sustainability; in discussing this theory, the researcher asserts that there can be no one-size-fits-all formula governing the innovation mechanism of an organization. As has been already covered, an organization's innovation is a befitting response to its structure, market conditions and internal culture. Clearly, the best innovation model for organizations should be able to combine the best elements of a blue ocean and a red ocean strategy, thereby, allowing organizations to sustainably compete in a rigorous market, and at the same time, brisk ahead of competitors through a pursuit of innovation.

Green innovation refers to the creation and adoption of new products, processes, technologies, or practices that reduce negative environmental impacts while promoting

sustainability (Ottman 2021). It focuses on energy efficiency, waste reduction, pollution prevention, and the use of renewable resources, helping organizations achieve both environmental protection and economic growth.

Eco-efficiency is the concept of creating more value with fewer resources while minimizing environmental impacts. It emphasizes improving productivity and competitiveness by reducing energy use, waste, and emissions in the production of goods and services (Schaltegger and Sturm, 2020). According to the World Business Council for Sustainable Development (WBCSD, 2020), eco-efficiency is achieved by delivering competitively priced goods and services that satisfy human needs and improve quality of life, while progressively reducing ecological impacts and resource intensity throughout the product life cycle.

Organizational competitiveness is the ability of a firm to sustain superior performance, adapt to dynamic environments, and maintain an edge over rivals by leveraging resources, innovation, and market positioning (Barney, 1991). In recent decades, competitiveness has increasingly been linked to sustainability, as firms are pressured to address environmental, social, and governance (ESG) issues while meeting consumer expectations and regulatory requirements (Grant, 2019). Organizations that embed sustainability into their strategies often achieve not only legitimacy but also long-term competitiveness by balancing economic growth with environmental stewardship and social responsibility (Hart & Dowell, 2011).

## **1.2 Statement of the Problems**

In today's dynamic business environment, organizations are under increasing pressure to remain competitive while addressing sustainability challenges such as climate change, resource depletion, and shifting consumer expectations. Traditional competitive strategies that focus solely on cost leadership or differentiation are proving inadequate for ensuring long-term survival, as they often neglect environmental and social dimensions of value creation. The Green Ocean Strategy, which emphasizes green innovation, eco-efficiency, green market differentiation, sustainable value creation, stakeholder engagement and organizational culture, offers a potential pathway for firms to achieve sustainable competitiveness. However, many organizations struggle to integrate this strategy effectively due to high implementation costs, limited stakeholder buy-in, weak regulatory support, and lack of clear performance metrics. As a result, despite the growing relevance of sustainable business practices, there remains a significant gap in understanding how adopting a Green Ocean Strategy can enhance organizational competitiveness, especially in industries where short-term profits often outweigh long-term sustainability goals.

### 1.3 Objective of the Study

The main objective of the study was to ascertain the influence of green ocean strategy on organizational competitiveness in selected manufacturing firms in South West, Nigeria. The specific objective includes;

1. To examine the influence of green innovation on organizational competitiveness in selected manufacturing firms in South West, Nigeria.
2. To ascertain the effect of eco-efficiency on organizational competitiveness in selected manufacturing firms in South West, Nigeria.

### 1.4 Research Questions

1. What is the influence of green innovation on organizational competitiveness in selected manufacturing firms in South West, Nigeria?
2. To what extent does eco-efficiency influence organizational competitiveness in selected manufacturing firms in South West, Nigeria?

### 1.5 Statement of Hypotheses

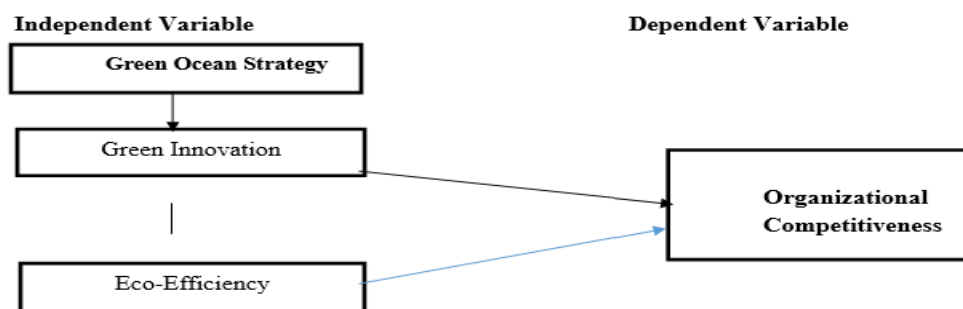
**H<sub>01</sub>:** There is no significant influence of green innovation on organizational competitiveness in selected manufacturing firms in South West, Nigeria,

**H<sub>02</sub>:** Eco-efficiency does not significantly influence on organizational competitiveness in selected manufacturing firms in South West, Nigeria,

## REVIEW OF RELATED LITERATURE

### 2.1 Conceptual Framework

The idea and qualitative characteristic of this study were discussed in this section of the study. These include the element that offer comparability, verifiability, timeliness, and ability of green ocean strategy and the organizational competitiveness of manufacturing firms



**Figure 2.1.** Conceptual model of green ocean strategy and organizational competitiveness by the researcher, 2025.

### 2.1.1 Green Ocean Strategy

The concept and principle of “Green” has gained attention in recent years, as individuals and societies become increasingly aware of the pressing need for sustainable development. The green concept refers to a metaphoric colouration of a greenish environment that depicts environmentally friendly practice aim at minimizing environmental impact, conserve natural resources, and promote the wellbeing of the ecosystem (Dehghan, *et al.*, 2023). It is a flourishing garden of means, end, and equity both for man, insects and the universe. The GOS entails the identification and development of eco-friendly products, processes, and practices that not only address environmental concerns but also create new market opportunities and enhance competitiveness (Su, Fan, and Wang, 2018). Unlike a traditional "Red Ocean" approach characterized by fierce competition in existing markets, a green ocean strategy focuses on creating value through innovation while simultaneously addressing ecological challenges.

According to Pablo and Dylan (2022) the field on which companies compete on their environmental, social, and governance (ESG) performance is vast, making it all but impossible for any company to successfully excel across all areas. This is obvious because organizations in the same line of business and amongst competing industries organizations would compete for same ESG (Pablo & Dylan, 2022), such for green fuel.

Developed before (Hou, 2017) (also called sustainability strategy, organizations that approach green strategy as green entrepreneurship (Ge *et al.*, 2018), it is a hybrid mechanism that combines the best of ocean strategies. Blue and Red Ocean (Tanțău and Mateșescu, 2023) ward identified and accessed to carry out innovation activities corresponding to the exploration of the "treasure of the sea". In other words, researching and developing or improving environmentally friendly products and services. This kind of "green ocean", on the one hand, has the characteristics of a blue ocean, that is, innovation is caused by the state's demand for sustainable development and people's demand for a green and healthy ecological environment. Therefore, green entrepreneurial organizations offer unique competitive advantages.

On the other hand, the green ocean also possesses some characteristics of the red ocean. That is, the fruits of many green entrepreneurial enterprises are merely innovations in manufacturing processes, but are not very different from other non-green products in terms of the function and performance of the product itself, both of which have powerful alternatives.

These companies will still face fierce competition in the market with a large number of alternative products. In this case, what bothers them is how to address their innovative costs (Ge *et al.*, 2018)

The green ocean strategy is a modern strategic choice with two different types of schools of thought. According to the First School of Thought, it is a strategy for measuring the impact of the ecological footprint on human life. According to the second, it is a hybrid mechanism that combines the best things that characterize blue ocean and red ocean strategies (Aithal *et al.*, 2015) The Green Ocean Strategy supports the impact of the ecological footprint on human life. From various unregulated documents such as newspapers, magazines and world web pages, it was revealed that the automobile industry has become one of the biggest contributors to environmental pollution worldwide (Aithal, 2016)

Green Ocean Strategy is a balanced approach that considers long-term benefits alongside immediate financial implications. It requires strong leadership commitment, cross functional collaboration, and a culture that encourages innovation and responsible decision-making (Dangelico and Pujari, 2020). Strategic alliances with stakeholders and partnerships across industries can also enhance the feasibility of sustainable ventures (Hockerts and Wüstenhagen, 2020). The GOS seeks congruence between positive environmental, social, and governance (ESG) impacts and financial profitability (Vinay *et al.*, 2024). Studies exploring the integration of GOS and drive towards sustainable growth reveal that organizations pursuing environmentally friendly innovations can create unique value propositions and carve out new market spaces (Sarkar and Costa, 2018). The adoption of renewable energy sources, circular economy models, and sustainable supply chain practices are shown to foster innovation while improving cost efficiencies (Bocken, *et al.*, 2016). Research conducted by Markopoulos *et al.*, (2020), also pointed out that the evolution of classical innovation to the integration of the social, shared value and environmental dimensions can impact desired sustainability needed to assure wide applicability, fast return on investment and strong competitive advantage. The GOS is based primarily on two key pillars and they include market differentiation and lifecycle thinking.

## **2.1.2 Dimension of Green Ocean Strategy**

### **2.1.2.1 Green innovation**

Green innovation refers to technological advancements associated with environmentally friendly processes or products. These advancements include energy conservation, alternative energy production, waste treatment, pollution prevention, and other related software and

hardware innovations. Green innovation aims to adopt new or improved environmentally friendly technologies. Technology that allows for the effective usage of resources and the reduction of environmental pollution (Li et al., 2023). Following the resource-based perspective concerning the significance of regional competitiveness, Measuring Eco-innovation valuable, scarce, irreplaceable, and difficult-to-replicate technology, as well as the production of novel and competitively priced goods, knowledge and other resources, serve as the foundation for businesses to innovate and establish sustainable Environmental Innovation Research competitive advantages.

The same reason that innovation is the driving force behind development, green innovation is the driving force behind green transformation and high-quality development. Green innovation includes the creation and implementation of new goods. Services: Green innovation is the driving force of greening transformation and high-quality development, and green innovation can make this growth sustainable processes and technologies that are environmentally friendly. Innovation is the engine of economic growth, just as innovation drives development, contributing to sustainable development and mitigating ecological impact (Shehzad et al., 2023). Green innovation can make this growth sustainable. The concept of green innovation involves several disciplines. From a management point of view, the primary emphasis is placed on the influence of industrial structural elements on the company's ability to adopt environmentally friendly initiatives and secure market competitive advantages (Abbas and Khan, 2023).

#### **2.1.2.2 Eco-efficiency**

Eco-efficiency is a management philosophy that encourages business to search for environmental improvements that yield parallel economic benefits. It focuses on business opportunities and allows companies to become more environmentally responsible and more profitable. It is a key business contribution to sustainable societies. Eco-efficiency opportunities can emerge at any point in the entire life-cycle of a product. This means employees need to understand what eco-efficiency is, the value it can bring to a company and how to make it happen. This in turn requires building skills and understanding in order to integrate eco-efficiency across business operations, sectors, countries and issues, and allowing space for innovation and creativity.

Eco-efficiency is a concept within sustainable development that encompasses two of the three sustainability elements: social, economic, and environmental sustainability. It disregards the social aspect and focuses on the economic and environmental aspects of sustainability in



isolation. The World Business Council for Sustainable Development (WBCSD, 2021) defined eco-efficiency as the delivery of competitively priced goods and services that satisfy human needs and bring the quality of life, while progressively reducing ecological impacts and resource intensity throughout the life cycle, to a level at least in line with the earth's carrying capacity. Essentially, eco-efficiency is a management strategy of producing more goods and services with fewer resources and emitting less waste and pollution (Glavič, Lesjak, and Hirsbak, 2012). The concept can be applied to different sectors, industrial processes, businesses as well as individual products. One can say that the concept of eco-efficiency functions as a basis of choice between various transformation processes through the combination of economic issues with scientific and technical ones. (Caiado *et al.*, 2017).

### **2.1.3. Concept of Organizational Competitiveness**

In the face of intensifying global competition, climate change pressures, and shifting consumer expectations, organizations are increasingly challenged to pursue strategies that not only ensure profitability but also address sustainability imperatives. Traditional competitive strategies often emphasize cost leadership or differentiation within existing market boundaries. However, these approaches are becoming less effective as industries face ecological constraints, regulatory demands, and calls for corporate responsibility. This has given rise to the green ocean strategy, an extension of the Blue ocean strategy that integrates sustainability, environmental consciousness, and value innovation to create uncontested market spaces (Dutta, 2012). The Green Ocean Strategy seeks to balance economic growth with ecological stewardship, enabling firms to generate sustainable value while minimizing environmental harm. The essence is to maximize profit by capturing consumer surplus, but the difficulty is in comprehending customer preferences and willingness to pay (Bassey, Ekanem & Edem, 2025). Ekanem *et al.* (2022). Efficiency is performance measured in terms of inputs and outputs; hence, a higher volume produced for a given input volume indicates greater efficiency. Effectiveness is measured by how well intended goals are accomplished.

Organizational competitiveness, on the other hand, refers to a firm's ability to achieve superior performance, adapt to dynamic environments, and maintain a distinct advantage over rivals (Barney, 2021). In the contemporary business landscape, competitiveness is no longer measured solely by financial outcomes, but also by the firm's capacity to innovate sustainably, attract environmentally conscious consumers, and comply with green regulations. By embedding ecological considerations into their core strategies, organizations can reduce costs through eco-efficiency, differentiate products via green market positioning,



and strengthen legitimacy through stakeholder engagement (Chen, 2018). Organization performance has been the most important consideration for every organization, be it profit or non-profit organization (Uforo et al. 2022)

Thus, the integration of green ocean strategy into organizational competitiveness offers firms a pathway to transcend zero-sum competition by pursuing both profitability and sustainability. It enables organizations to reconfigure resources, build dynamic capabilities, and create long-term sustainable value, positioning them to thrive in an era where green innovation and ecological responsibility are becoming key determinants of competitive advantage. Successful organizations are the ones with specific time-table for the use of its resources and processes required by a business to provide services (Akpaetor & Akpan, 2022). As strategic change is certain to occur, management in most banks ignore affected employees by not communicating to them in honest and timely manner (Akpaetor and Madubuike, 2022).

The relationship between organizational competitiveness and the Green Ocean Strategy lies in the ability of firms to differentiate themselves through sustainability-oriented innovations that open new market opportunities while ensuring long-term ecological and social resilience (Okoye *et al.*, 2023).). By aligning competitiveness with green value creation, organizations can secure brand loyalty, mitigate risks, and enhance reputation in a world where environmental responsibility is increasingly a determinant of business success (Chen, 2008; Lozano, 2015). Hence, the Green Ocean Strategy is gaining traction as a pathway for organizations seeking to achieve sustainable competitiveness in the 21st century. The growth of management not only involves the acquisition of knowledge, competence and experience, but also the development of resilience (Imagha, Ugwunwanyi & Akpaetor, 2021).

#### **2.1.11 Green Innovation and Organizational Competitiveness**

According to the resource-based approach, businesses can enhance their capabilities by making full use of the resources at their disposal. This will assist in the preservation of competitive advantages and the achievement of sustainable development. To put it another way, the capabilities of the business are the source of both growth and sustainable development for the company, and the characteristics of the enterprise are the source of the capabilities. The resources (Wu et al., 2023). Based on the findings of this research, it is believed that integrating digital resources and skills for green technology innovation is the key to encouraging corporate development developing and retaining competitive advantages, and green innovation plays an essential role in the applications of Business Sustainability. It also acts as a mediator between the performance of sustainable development and resource

utilization (Huang et al., 2023). This article believes that environmentally conscious innovation has the potential to enhance the improvement of corporations' sustainable development performance favorably. When viewed from the "resources capabilities-growth" perspective of the resource-based view, green innovation, in terms of its impact on corporate economic performance, represents the company's key technological innovation capabilities. Akpaetor and Madubuike, (2023). Posit that strategic response are decisions and actions that firms apply or resort to in the face of business competition or turbulent business landscape. When an organization fail to respond to competition, it unavoidably opens up itself for competitive attack from rival firms

Additionally, green innovation has the potential to provide sources and motivation for corporate growth, which ultimately contributes to an improvement in corporate economic performance. To begin, businesses can lower the amount of material input in manufacturing and other processes, achieve intense output, and cut expenses . However, they may also enhance their production capacity by using new or better production techniques throughout the implementation of green innovation. Improve the input-output rate and promote economic performance; secondly, by implementing green innovation, enterprises can establish an environmentally friendly image to the public, gain more green recognition and capital support, accumulate a good social reputation, and not only obtain environmental premiums and new profit points, and compared with competitors, it can form differentiated advantages, help companies win better market performance, and then improve economic performance. Enterprises may also avoid opposition from external stakeholders and the expense of environmental infractions by adopting green innovation (Chen et al., 2023). Additionally, this allows them to cut extra economic expenditures, which ultimately leads to an improvement in the corporation's financial performance.

From the perspective of the influence on environmental and social responsibility performance, the application of green innovation by businesses may contribute to reducing environmental hazards across the whole process (Xu & Dong, 2023). To begin, in terms of source prevention, companies engage in green innovation, which includes using alternative energy, wind energy, solar energy, and other forms of energy that are favorable to the environment. This is done to avoid the emission of greenhouse gases and other pollutants from the source. Second, concerning the management of the production process, on the one hand, energy-saving technologies are utilized to encourage the circulation of raw materials and process systems, enhance resource utilization, and decrease waste in intermediate processes such as industrial production, thereby alleviating resource constraints, on the other

hand, the production process is one of the most important aspects of the management of the production process. As part of the manufacturing process, any pollutants produced throughout the process are broken down and digested to achieve clean production. Thirdly, concerning end-of-pipe treatment, businesses use waste treatment and other technologies to improve the safe disposal of industrial waste that is polluting after the manufacturing process, to meet end-of-line emissions standards in the manufacturing process, and to lessen the number of environmental loads (Chen et al., 2023). The word performance is derived from job performance or actual performance, which refers to an individual's actual accomplishment at work (Ekanem *et al.* 2026). Performance is a fundamental measure of an organization's ability to achieve its strategic objectives effectively and efficiently (Ekanem & Efi, 2025)

## **2.2 Theoretical Review**

### **2.2.1 The resource-based view (RBV) by Birger Wernerfelt (1984)**

The resource-based view (RBV) asserts the heterogeneity of firms, that it is the distinctive, immobile, inimitable, sometimes intangible bundle of resources residing in the firm that gives the firm an opportunity for competitive advantage and superior performance (Griffin, and Moorhead 2014). The RBV examines the links between the firm's internal features and processes, and its performance. Since a firm is a collection of productive resources, it is the resources of the firm that provide the services and products the firm sells, thus the size of the firm depends on the productive resources it employs (Ittner and Larcker 2012). The RBV provides an explanation of competitive heterogeneity based on the premise that close competitors differ in their resources and capabilities in important and durable ways.

The RBV framework can inform the Green ocean strategy by helping firms identify and leverage their unique resources and capabilities to create innovative value propositions. By understanding their internal strengths, organizations can develop offerings that differentiate them from competitors, making competition irrelevant. While Green ocean strategy focuses on market creation and value innovation, the RBV provides a framework for ensuring that the unique resources leveraged in blue ocean pursuits are sustainable over the long term. By utilizing resources that are valuable, rare, inimitable, and non-substitutable, firms can maintain their competitive advantages in newly created markets. The essence of the RBV is to position businesses in their competitive contexts by precisely looking into the sources of success within the firm rather than in the external context and this influences leveraging superior performance (Barney, 2012).

The RBV emphasizes the importance of internal capabilities, which can be pivotal in executing blue ocean strategies. Companies must assess their resource base to determine if they possess the necessary skills, technology, and organizational capabilities to successfully innovate and create new markets. The alignment of a firm's resources and capabilities with its strategic goals is essential for successful implementation of both RBV and Green Ocean Strategy. Organizations need to ensure that their resources support their value innovation initiatives and that they can effectively execute their blue ocean strategies using their unique capabilities. Both frameworks emphasize the importance of dynamic capabilities, which refer to a firm's ability to adapt and reconfigure its resources in response to changing market conditions. In pursuing blue ocean opportunities, firms must possess the dynamic capabilities to continuously innovate, adjust their strategies, and reallocate resources as necessary.

The Resource-Based View and Green ocean strategy are complementary frameworks that offer valuable insights for organizations seeking to achieve and sustain competitive advantage. While the RBV emphasizes leveraging unique resources and capabilities to create value, Green ocean strategy focuses on innovation and market creation. By integrating these two perspectives, firms can effectively identify opportunities for differentiation and value innovation while ensuring that their internal capabilities align with their strategic objectives. This holistic approach is essential for organizations aiming to thrive in increasingly competitive and dynamic business environments.

### **2.3 Empirical Review**

Mbonu, (2025) studied green ocean strategy and the performance of Telecommunication Companies in Enugu Nigeria. This study examined the relationship between green ocean strategy and the performance of selected telecommunication companies in Enugu Nigeria. Population of the study making up a total of three thousand eight hundred and five (3,805) constitutes the staff and management of MTN, Globalcom, and Airtel in Enugu metropolis in the month of December, 2024. Data for the study were collected through the distribution of well-structured questionnaires. The Cochran Sample determiner was used as the sample size derivation statistic and it yielded three hundred and fifty (350). The study utilized both qualitative and quantitative approaches to data analysis. This is through the descriptive and inferential statistical tools of analysis. The descriptive that was used in the interpretation and analyses of data through the frequency tables and simple percentages. The major findings of the research are that reduction strategy has a positive and significant effect on the performance of telecommunication companies in Enugu State, elimination strategy has a positive and significant effect on the performance of telecommunication companies in Enugu

State, creative strategy has a positive and significant effect on the performance of telecommunication companies in Enugu State and innovation strategy has a positive and significant effect on the performance of telecommunication companies in Enugu State. It is therefore the recommendation of this study that companies should keep abreast of technological innovations and industry trends to anticipate future demands and identify new opportunities for differentiation.

Uttong *et al.* (2024) examined green ocean strategy and sustainable competitive advantage in fast moving consumer good industry in Nigeria. The main objective of this study was to ascertain the effect of green ocean strategy dimensions such as value innovation, demand creation, growth and profitability on sustainable competitive advantage in fast moving consumer good industry in Nigeria. Methodologically, survey research design was adopted for the study. The population of the study was 157 full-time employees and a sample size of 113 was drawn from the population using Taro Yamane Formula. The collected data were further analyzed using Simple Linear Regression at a 0.05 level of significance. Findings showed that the three independent variables (value innovation with  $X_1 = R^2 = 63.9$ , demand creation  $X_2 = 67.9$  at 0.05 level of significance and  $X_3 = 52.3$ ). It was concluded that by substituting competitive advantage for value innovation, demand creation, growth and profitability as the main objectives where businesses must generate customer demand and penetrate undiscovered markets green ocean strategy aims to completely flip the conventional wisdom on strategic management. It was recommended that value innovation is a cornerstone of the green ocean strategy and represents the simultaneous pursuit of differentiation and low cost, creating a leap in value for both the company and its customers.

Mutua and Chacha, (2024) investigate analysis of green ocean strategies on the Performance of Roofing Sheet Manufacturers in Kenya. The main purpose of this study was to analyse the effect of blue ocean strategies on the performance of roofing sheet manufacturers in Kenya. The specific objectives of this study were to establish the effect of value innovation strategy, examine the effect of customer acquisition strategy, evaluate the effect of competitor elimination strategy on the performance of roofing sheet manufacturers in Kenya. The study adopted a mixed research method and employed a descriptive research design. The target population consisted of 241 employees drawn from all the fifteen (15) roofing sheet manufacturers in Kenya registered with the Kenya Association of Manufactures (KAM), from whom a sample size of one hundred and twenty-seven (127) employees was selected using the Krejcie and Morgan table formula. The findings of this study have illuminated a statistically significant positive effect of Blue Ocean strategies

on firm performance, albeit with variations among specific strategies. These statistics imply that 51% of the variance in the performance of roofing sheet manufacturers can be attributed to the adoption of the blue ocean strategy. Consequently, the study recommends that roofing sheet manufacturers must prioritize the adoption of need-based value innovation and customer acquisition strategies overall blue ocean strategies over any other strategies therein to ensure sustainable performance.

Kim, and Mauborgne, (2024) investigates green ocean strategy on sustainable development in manufacturing firms in Kenya. Cross sectional survey research design was adopted for the study with a population of 2002 management staff and sample size of 275 was drawn using taro Yamane's formula. The study finding revealed a positive correlation between value innovation and financial performance metrics such as profitability, revenue growth, and return on investment (ROI). For instance, a study by Kim and Mauborgne (2005) demonstrated that companies like Cirque du Soleil achieved significant financial success through value innovation by reimagining the traditional circus model, leading to increased ticket sales and profitability. It was concluded that value innovation and financial performance metrics such as profitability, revenue growth, and return on investment (ROI) influences sustainable development in manufacturing firms in Kenya.

Seesalavong, (2024) studied on causal factors of green ocean strategy formulation affecting the overall business growth of Boutique Hotels. This article aimed 1) to study the causal factors affecting green ocean strategy formulation and the overall business growth of boutique hotels, 2) to study the influence of causal factors of green ocean strategy formulation affecting the overall business growth of boutique hotels, and 3) to develop a model the causal factors of green ocean strategy formulation affecting the overall business growth of boutique hotels. A researcher collected data from interviews and online questionnaires with boutique hotels, from April 2024 to June 2024 by collecting a sample of 620 people. The results of the analysis concluded that unique service quality affected green ocean strategy formulation, unique service quality affected overall business growth through green ocean strategy formulation, digital transformation affect green ocean strategy formulation, digital transformation affected overall business growth through green ocean strategy formulation, organizational innovation affected on green ocean strategy formulation, organizational innovation affected overall business growth through green ocean strategy formulation, and green ocean strategy formulation affected overall business growth.

## METHODOLOGY

Information on the research design, study population, sample and sampling procedures, data collection method, data sources, and data analysis techniques are all included in this chapter.

### 3.1 Research Design

The cross sectional survey research design will be employ in this study by the researcher to create a better understanding of individual or group viewpoints concerning a specific concept or issue of interest. Since the focus of this study is on the experiences of people working in manufacturing sector, quantitative methods will be use to investigate the topic's holistic character. A cross-sectional survey research design will be use since the data needed for this study would be source primarily.

### 3.2 Population of the Study

The population of the study consist of six (6) manufacturing firms in Lagos State, specifically chosen for the research. The chosen companies are the leading Manufacturing firms in Nigeria's fast-moving consumer goods sectors and have participated in several contests and new product development. These firms are Nestle Nigeria Plc, Unilever Nigeria, Cadbury Nigeria Plc, Dangote Sugar Refinery Plc, UAC Foods Limited and FrieslandCampina Wamco. The number of employees and management staff in these organizations is shown in the table 3.1. Therefore, one thousand three and two (1002) will be use as the population for the study.

### 3.3 Sample Size Determination

The sampling distribution approach is considered a critical topic in research to prevent bias in data collection. Therefore, the researcher would specify the sample size within the target population.

For calculating sample sizes, this study will use Krejcie and Morgan Formula, which is stated as follows:

$$s = [x^2 np (1-p)] / [d^2 (n-1) + x^2 p (1-p)]$$

#### Where

**n** = require sample size

**X<sup>2</sup>** = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841), same as (1.96). (1.96)

**N** = the population size

**P** = the population proportion (assumed to be .50 since this would provide the maximum sample size)

**d** = the degree of accuracy expressed as a proportion (.50)



Since  $N = 1,002$

$$n = [3.841 (1002) (0.5) (1-0.5) / [0.05^2 (1002-1) / [3.841(0.5) (1-0.5)$$

$$3.841 (1002) (0.5) (0.5) / [0.0025 (1001) + [3.841(0.5) (0.5)$$

$$= 962.1705 / (2.5025 + 0.96025)$$

$$= 962.1705/3.46275$$

$$= 277$$

Sample size (n) = 277.

### 3.4 Sampling Techniques

stratified sampling techniques would be used in this study to choose its respondents, guaranteeing that each member of the population has an equal chance of being chosen. Accuracy cannot be guaranteed by a large sample size.

| S/N | FIRMS                      | Proportion     |            |
|-----|----------------------------|----------------|------------|
| 1.  | Nestle Nigeria Plc         | 203/1002 x 332 | 54         |
| 2.  | Unilever Nigeria Plc       | 165/1002 x 332 | 45         |
| 3.  | Cadbury Nigeria Plc        | 178/1002 x 332 | 47         |
| 4.  | Dangote Sugar Refinery Plc | 145/1002 x 332 | 39         |
| 5.  | UAC Foods Limite.          | 197/1002 x 332 | 53         |
| 6.  | FrieslandCampina Wamco     | 114/1002 x 332 | 33         |
|     | <b>Total</b>               |                | <b>271</b> |

Source: Filed Survey, (2026).

### 3.5 Sources of Data Collection

This study will use the primary source of data. Primary data is more accurate and reliable because it comes from a direct source. It's faster and easier to collect primary data than secondary data, which can take weeks or even months to collect.

### 3.6 Method of Data Collection

This study will adopt questionnaire with 5-point likert scale which include, Strongly agreed SA (5), Agreed A (4), Undecided (3), Strongly Disagreed SD (2), Disagreed D (1). The questionnaire was divided into section A (which reviewed the demographic variables of respondents) and section B which contained some research questions relevant to the problem at hand. The research instrument that will be use in the collection of data in this study is questionnaire. In a bid to get the precise opinion, the questionnaire will be design in a way that enable respondent to choose the most appropriate option out of the alternative questions. The questionnaire will be arrange in two sections, the first briefly capture the demographic information of the respondents while the second part focused on questions bordering on the

subject matter which is strategic alliance and effective performance. The questions in the questionnaire were close-ended and also was drafted in a simple, explicit and understandable language. The study will make use of ordinal data, ordinal data is a statistical type of quantitative data in which variables exist in naturally occurring ordered categories.

### 3.7 Research Instrument

The questionnaire consisted of two sections. Section A measure the participants' demographic details which included race, age, gender, tenure and job level. Section B will consist of the strategic alliance and effective performance. Questionnaire which will be a virtually self-administering survey and consists of 20 statements measuring the three dimensions of strategic alliance namely and effective performance. The statements of the questionnaire were configured using a five-point Likert scale ranging from 1, strongly disagree, to 5, strongly agree. The ethical clearance to conduct the research in the organization was granted by the management of the department and research institution. An invitation to participate voluntarily in the study will be send to the employees.

### 3.8 Validation of Instrument

The face validity and content validity of the research instrument was determined after thorough evaluation by the supervisor of this project and other experts in the field of management. Their suggestions and recommendations for improvement were use to review and improve on the research instrument, by so doing, the validity of the instrument was assured.

### 3.9 Reliability of Instrument

Reliability is the degree of consistency that the instrument or procedure demonstrates (Best and Kahn 2006). In this study reliability was achieved by measuring consistent results from the respondents. Reliability of data were assured through information collected from relevant respondents with specific attention to key issues related to reward and compensation management and organizational performance which hinder smooth operations, proper wording of instructions and logical arrangement of questions that will be asked. Furthermore, Cronbach Alpha will be adopted to test for internal consistency of the construct.

**Table 3.7. 1: Reliability Analysis.**

| Scale                          | Cronbach's Alpha | Number of Items |
|--------------------------------|------------------|-----------------|
| Green innovation               | 0.771            | 4               |
| Eco-efficiency                 | 0.824            | 4               |
| organizational competitiveness | 0.814            | 4               |
| Total                          | 0.841            | 20              |

Source: Survey data, (2026)

### 3.10 Empirical Model Specification

The model used will be premised on the main objectives and anchored on the sub-objective. The following mathematical model was developed to analyse the influence of green ocean strategy on organizational competitiveness in manufacturing industry using green innovation, eco-efficiency, green market differentiation, sustainability value creation and stakeholders engagement as the explanatory variables to see how it influence organizational competitiveness in manufacturing industry which is the dependent variable.

The model was adapted from the study of Ayandele, *et al* (2022) model is  $QS = f(KA, KS, KT)$ . The Ayandele, *et al* (2022) model was modified to suit the variables to be used. Hence the model for the study was anchored on the objective.

The regression model is expressed below:

$$y = X_i + X_{ii} + X_{iii} + X_{iv} + X_v + \varepsilon \quad \text{Equation 3.2}$$

### 3.11 Method of Data Analysis

The levels of quantitative analysis included descriptive statistics. However, in this study, the Simple Linear Regression was employed to ascertain the influence that exist between the variables.

### 3.12 Decision criteria

The decision rule used in this study is stated thus; Reject the null hypotheses if the probability value (p-value) is less than 0.05 ( $p < 0.05$ ). Alternatively, accept the null hypotheses if the probability value (p-value) is greater than 0.05 ( $p > 0.05$ ) (Mallery, 2003). This can be stated symbolically as: Accept  $H_0$  if  $P_c < P_t$ . Reject  $H_0$  if  $P_c > P_t$ .

## 4. DATA PRESENTATION, ANALYSIS AND FINDINGS

A total of 332 copies of the questionnaire were distributed. 271 were completed and returned representing 81.6 per cent return rate. Out of 271 returned, 3 copies were found to be significantly providing inconsistent answers which resulted in the exclusion from coding and analysis.

#### 4.1 Presentation of Data Analysis

**Table: 4.1 Percentage Distribution of Responses on green innovation**

| S/N | Item                                                                  | SA (%) | A (%) | U (%) | D (%) | SD (%) |
|-----|-----------------------------------------------------------------------|--------|-------|-------|-------|--------|
| 1   | Our organization develops environmentally friendly products           | 38.7   | 41.0  | 10.3  | 6.3   | 3.7    |
| 2   | We adopt innovative technologies to reduce environmental impact       | 40.2   | 39.1  | 9.6   | 6.6   | 4.5    |
| 3   | The company invests in research and development for green solutions   | 35.8   | 42.4  | 11.1  | 6.3   | 4.4    |
| 4   | Our production processes are regularly improved to minimize pollution | 37.6   | 41.3  | 10.0  | 6.3   | 4.8    |

**Source: Field Survey (2026)**

From the table 4.1, green innovation indicates a high level of agreement among respondents regarding the adoption of environmentally sustainable practices within their organizations. Specifically, a majority of respondents either strongly agreed or agreed that their organizations develop environmentally friendly products (38.7% and 41.0%), suggesting that product innovation is aligned with environmental sustainability goals. Similarly, 40.2% of respondents strongly agreed and 39.1% agreed that their organizations adopt innovative technologies to reduce environmental impact. This reflects a strong commitment to technological advancement in addressing environmental concerns. In addition, 35.8% strongly agreed and 42.4% agreed that their organizations invest in research and development for green solutions, indicating that firms are proactive in fostering innovation that supports sustainability.

Furthermore, the results show that 37.6% of respondents strongly agreed and 41.3% agreed that their production processes are regularly improved to minimize pollution. This suggests that organizations are continuously refining their operational processes to enhance environmental performance. Overall, the low percentages of disagreement across all items indicate minimal opposition to these statements, reinforcing the conclusion that green innovation practices are widely adopted. These findings imply that manufacturing firms demonstrate a strong commitment to integrating environmental considerations into their innovation strategies, which may contribute positively to their overall performance and competitiveness.

**Table: 4.2 Percentage Distribution of Responses on Eco-Efficiency**

| S/N | Item                                                                | SA (%) | A (%) | U (%) | D (%) | SD (%) |
|-----|---------------------------------------------------------------------|--------|-------|-------|-------|--------|
| 5   | Our organization efficiently uses energy in its operations          | 39.5   | 40.6  | 9.2   | 6.3   | 4.4    |
| 6   | We minimize waste generation during production processes            | 41.0   | 38.7  | 9.6   | 6.3   | 4.4    |
| 7   | The company optimizes the use of raw materials to reduce costs      | 38.4   | 41.7  | 9.2   | 6.6   | 4.1    |
| 8   | Recycling and reuse of materials are encouraged in our organization | 36.9   | 42.8  | 9.6   | 6.3   | 4.4    |

**Source: Field Survey (2026)**

The descriptive analysis of eco-efficiency indicates a high level of agreement among respondents regarding the efficient use of resources within their organizations. The results show that 39.5% of respondents strongly agreed and 40.6% agreed that their organizations efficiently use energy in their operations, suggesting a strong commitment to energy management practices. Similarly, a majority of respondents (41.0% strongly agreed and 38.7% agreed) affirmed that their organizations minimize waste generation during production processes. This reflects an active effort by firms to reduce operational waste and improve environmental performance.

In addition, 38.4% of respondents strongly agreed and 41.7% agreed that their organizations optimize the use of raw materials to reduce costs, indicating that resource efficiency is a key operational priority. Furthermore, 36.9% strongly agreed and 42.8% agreed that recycling and reuse of materials are encouraged within their organizations, highlighting the adoption of sustainable waste management practices. The relatively low proportions of disagreement across all items suggest minimal resistance to eco-efficiency practices. These findings imply that manufacturing firms have effectively integrated eco-efficiency into their operations, which may contribute to cost reduction, improved productivity, and enhanced environmental sustainability.

## 4.2 Test of Hypotheses

**H<sub>01</sub>:** There is no significant influence of green innovation on organizational competitiveness in selected manufacturing firms in South West, Nigeria,

| <b>Model Summary<sup>b</sup></b>            |                   |                 |                          |                                   |                      |
|---------------------------------------------|-------------------|-----------------|--------------------------|-----------------------------------|----------------------|
| <b>Model</b>                                | <b>R</b>          | <b>R Square</b> | <b>Adjusted R Square</b> | <b>Std. Error of the Estimate</b> | <b>Durbin-Watson</b> |
| 1                                           | .830 <sup>a</sup> | .688            | .687                     | .43348                            | 1.755                |
| a. Predictors: (Constant), Green Innovation |                   |                 |                          |                                   |                      |
| b. Dependent Variable: Org Competitiveness  |                   |                 |                          |                                   |                      |

| ANOVA <sup>a</sup>                          |            |                |     |             |         |                   |
|---------------------------------------------|------------|----------------|-----|-------------|---------|-------------------|
| Model                                       |            | Sum of Squares | Df  | Mean Square | F       | Sig.              |
| 1                                           | Regression | 100.852        | 1   | 100.852     | 536.727 | .000 <sup>b</sup> |
|                                             | Residual   | 45.660         | 270 | .188        |         |                   |
|                                             | Total      | 146.512        | 271 |             |         |                   |
| a. Dependent Variable: Org Competitiveness  |            |                |     |             |         |                   |
| b. Predictors: (Constant), Green Innovation |            |                |     |             |         |                   |

| <b>Coefficients<sup>a</sup></b>            |                                    |                   |                                  |          |             |
|--------------------------------------------|------------------------------------|-------------------|----------------------------------|----------|-------------|
| <b>Model</b>                               | <b>Unstandardized Coefficients</b> |                   | <b>Standardized Coefficients</b> | <b>t</b> | <b>Sig.</b> |
|                                            | <b>B</b>                           | <b>Std. Error</b> | <b>Beta</b>                      |          |             |
| 1 (Constant)                               | .638                               | .142              |                                  | 4.492    | .000        |
| Green Innovation                           | .824                               | .036              | .830                             | 23.167   | .000        |
| a. Dependent Variable: Org Competitiveness |                                    |                   |                                  |          |             |

The results of the simple linear regression analysis indicate that green innovation has a strong and positive relationship with organizational competitiveness ( $R = 0.830$ ). The coefficient of determination ( $R^2 = 0.688$ ) shows that 68.8% of the variation in organizational competitiveness is explained by green innovation, while the remaining 31.2% is attributed to other factors not included in the model. The adjusted  $R^2$  value of 0.687 confirms the stability and reliability of the model. The ANOVA results reveal that the regression model is statistically significant ( $F(1,243) = 536.727$ ,  $p = 0.000 < 0.05$ ), indicating that green innovation is a significant predictor of organizational competitiveness. This implies that the model provides a good fit for explaining the relationship between the variables.

Furthermore, the coefficient results show that green innovation has a positive and statistically significant influence on organizational competitiveness ( $\beta = 0.830$ ,  $t = 23.167$ ,  $p = 0.000 < 0.05$ ). Specifically, the unstandardized coefficient ( $B = 0.824$ ) indicates that a one-unit increase in green innovation leads to a 0.824 increase in organizational competitiveness. The constant term ( $B = 0.638$ ,  $p < 0.05$ ) represents the baseline level of organizational competitiveness when green innovation is held constant at zero. The Durbin-Watson statistic of 1.755 suggests that there is no serious autocorrelation problem in the model.

Based on these findings, the null hypothesis ( $H_{01}$ ), which states that there is no significant influence of green innovation on organizational competitiveness in selected manufacturing firms in South West Nigeria, is rejected. It is therefore concluded that green innovation has a

strong, positive, and significant influence on organizational competitiveness in the selected manufacturing firms.

**H<sub>02</sub>:** Eco-efficiency does not significantly influence on organizational competitiveness in selected manufacturing firms in South West, Nigeria.

| Model Summary <sup>b</sup>                 |                   |          |                   |                            |               |
|--------------------------------------------|-------------------|----------|-------------------|----------------------------|---------------|
| Model                                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1                                          | .833 <sup>a</sup> | .694     | .693              | .42959                     | 1.455         |
| a. Predictors: (Constant), Eco_efficiency  |                   |          |                   |                            |               |
| b. Dependent Variable: Org Competitiveness |                   |          |                   |                            |               |

| ANOVA <sup>a</sup>                         |                |         |             |         |         |      |
|--------------------------------------------|----------------|---------|-------------|---------|---------|------|
| Model                                      | Sum of Squares | Df      | Mean Square | F       | Sig.    |      |
| 1                                          | Regression     | 101.667 | 1           | 101.667 | 550.907 | .000 |
|                                            | Residual       | 44.845  | 270         | .185    |         |      |
|                                            | Total          | 146.512 | 271         |         |         |      |
| a. Dependent Variable: Org Competitiveness |                |         |             |         |         |      |
| b. Predictors: (Constant), Eco efficiency  |                |         |             |         |         |      |

| Coefficients <sup>a</sup>                  |                             |            |                           |      |        |      |
|--------------------------------------------|-----------------------------|------------|---------------------------|------|--------|------|
| Model                                      | Unstandardized Coefficients |            | Standardized Coefficients | T    | Sig.   |      |
|                                            | B                           | Std. Error | Beta                      |      |        |      |
| 1                                          | (Constant)                  | 1.125      | .120                      |      | 9.384  | .000 |
|                                            | Eco efficiency              | .713       | .030                      | .833 | 23.471 | .000 |
| a. Dependent Variable: Org Competitiveness |                             |            |                           |      |        |      |

The results of the simple linear regression analysis show that eco-efficiency has a strong and positive relationship with organizational competitiveness ( $R = 0.833$ ). The coefficient of determination ( $R^2 = 0.694$ ) indicates that 69.4% of the variation in organizational competitiveness is explained by eco-efficiency, while 30.6% is explained by other variables not included in the model. The adjusted  $R^2$  value of 0.693 confirms that the model is stable and reliable. The ANOVA results reveal that the overall regression model is statistically significant ( $F(1,243) = 550.907$ ,  $p = 0.000 < 0.05$ ), indicating that eco-efficiency significantly predicts organizational competitiveness. This suggests that the model provides a good fit to the data and is appropriate for explaining the relationship between the variables.

The coefficient results further show that eco-efficiency has a positive and statistically significant effect on organizational competitiveness ( $\beta = 0.833$ ,  $t = 23.471$ ,  $p = 0.000 < 0.05$ ). Specifically, the unstandardized coefficient ( $B = 0.713$ ) implies that a one-unit increase in eco-efficiency leads to a 0.713 increase in organizational competitiveness. The constant term ( $B = 1.125$ ,  $p < 0.05$ ) indicates the baseline level of organizational competitiveness when eco-



efficiency is held constant at zero. Additionally, the Durbin-Watson statistic of 1.455 suggests that there is no serious autocorrelation problem in the model. Based on these findings, the null hypothesis stating that eco-efficiency has no significant effect on organizational competitiveness is rejected, while the alternative hypothesis is accepted. This implies that eco-efficiency significantly and positively influences organizational competitiveness.

### 4.3 DISCUSSION OF FINDINGS

From the objective one which was to examine the influence of green innovation on customer satisfaction in selected manufacturing firms in South West, Nigeria. The findings of this study revealed that green innovation has a strong, positive, and statistically significant influence on organizational competitiveness in selected manufacturing firms in South West Nigeria. The high explanatory power of the model ( $R^2 = 0.688$ ) indicates that green innovation accounts for a substantial proportion of the variation in organizational competitiveness. This suggests that firms that actively engage in environmentally friendly innovations such as eco-friendly products, cleaner production processes, and sustainable technologies are more likely to achieve higher levels of competitiveness. The significant positive coefficient ( $\beta = 0.830$ ,  $p < 0.05$ ) implies that improvements in green innovation lead to corresponding increases in organizational competitiveness. This finding is in tangent with finding of Dehghan, *et al.*, (2023) who highlighted that green innovation is not just an environmental obligation but also a strategic tool for enhancing efficiency, reducing waste, lowering operational costs, and improving product quality. Consequently, firms that adopt green innovation practices are better positioned to gain competitive advantage in increasingly sustainability-conscious markets.

These findings are consistent with existing empirical literature, which emphasizes the role of green innovation in driving firm performance and competitiveness. Prior studies have shown that organizations that integrate environmental innovation into their operations tend to experience improved market performance, enhanced brand reputation, and increased customer satisfaction. This supports the resource-based view (RBV), which posits that unique capabilities such as innovation and environmental management can serve as valuable, rare, and inimitable resources that drive sustained competitive advantage.

From the objective two which was to ascertain the effect of eco-efficiency on customer satisfaction in selected manufacturing firms in South West, Nigeria. The findings of this study revealed that eco-efficiency has a strong, positive, and statistically significant influence on

organizational competitiveness. The high coefficient of determination ( $R^2 = 0.694$ ) indicates that eco-efficiency explains a substantial proportion of the variation in organizational competitiveness, suggesting that organizations that adopt eco-efficient practices are more likely to enhance their competitive position. This result is in line with that of Tanțău and Mateșescu, (2023) who found that the growing importance of sustainability-driven strategies in improving firm performance and long-term viability. The significant positive coefficient ( $\beta = 0.833$ ,  $p < 0.05$ ) further implies that increases in eco-efficiency lead to corresponding improvements in organizational competitiveness. This finding aligns with the argument that efficient use of environmental resources, waste reduction, and sustainable production processes not only reduce operational costs but also improve corporate image, customer loyalty, and market positioning.

These findings are consistent with prior empirical studies. For instance, studies on environmental management and firm performance have shown that eco-efficiency enhances both financial and non-financial performance outcomes. Similar results were reported by scholars who found that firms adopting green practices and resource efficiency strategies tend to achieve higher productivity and competitive advantage. The findings corroborate earlier research in sustainability and corporate performance, which suggests that environmentally responsible practices contribute positively to organizational success. Organizations that integrate eco-efficiency into their core operations are better positioned to comply with environmental regulations, reduce risks, and respond to increasing stakeholder demand for sustainable products and services.

#### 4.4 CONCLUSION

This study examined the influence of Green Ocean Strategy on organizational competitiveness in selected manufacturing firms in South West, Nigeria, with emphasis on green innovation and eco-efficiency. The findings established that both dimensions of Green Ocean Strategy significantly and positively influence organizational competitiveness. Green innovation was found to improve competitiveness by encouraging the development of environmentally friendly products, cleaner production technologies, and sustainable business processes that enhance market positioning and operational performance. Likewise, eco-efficiency was shown to strengthen competitiveness through the efficient utilization of energy and raw materials, waste reduction, recycling, and improved resource management, thereby lowering operational costs while promoting environmental sustainability.

The findings support the Resource-Based View (RBV), which argues that organizations that effectively develop and utilize unique strategic capabilities can achieve sustainable competitive advantage. The results demonstrate that environmental sustainability is no longer merely a corporate social responsibility initiative but has become a strategic imperative capable of improving organizational performance and long-term competitiveness. Consequently, manufacturing firms that integrate Green Ocean Strategy into their business models are better positioned to respond to changing market demands, comply with environmental regulations, enhance stakeholder confidence, and sustain competitive advantage in an increasingly dynamic business environment.

#### 4.5 RECOMMENDATIONS

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

1. Manufacturing firms should increase investment in green innovation by developing environmentally friendly products, adopting cleaner production technologies, and strengthening research and development activities that promote sustainable business growth.
2. Management should prioritize eco-efficiency by implementing energy-efficient production systems, minimizing waste generation, optimizing raw material utilization, and promoting recycling and resource recovery across production processes.
3. Organizations should integrate Green Ocean Strategy into their corporate strategic planning by aligning environmental sustainability objectives with long-term business goals to strengthen organizational competitiveness.

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