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GREEN PROCUREMENT AND SUSTAINABLE DEVELOPMENT

By

¹Ogunsanwo, Abayomi O., ²Oyelekan Azeez A. & ³Ajibola, Rihanat

Department of Procurement and Supply-Chain Management, Federal University of Technology, Ilaro (FUTI), Ogun state, Nigeria.

Department of General Studies, University of Technology, Ilaro (FUTI), Ogun state, Nigeria.

*abayomi.ogunsanwo@federalpolyilaro.edu.ng; azeez.oyelekan@federalpolyilaro.edu.ng
+234816946431; +2348164597517; +2349053565967*

Abstract:

This study examined the effect of green procurement on sustainable development with specific emphasis on green packaging practice, green supplier partnership, and energy efficient procurement. The increasing environmental challenges confronting organizations and societies have intensified the need for sustainable procurement practices capable of promoting environmental protection, efficient resource utilization, and long-term organizational sustainability. The study adopted a quantitative research design using a survey research approach. Primary data were collected through the administration of structured questionnaires to employees involved in procurement and supply chain management activities within selected organizations in Nigeria. A total of 200 questionnaires were distributed, out of which 180 valid responses were retrieved and analyzed using Statistical Package for Social Sciences (SPSS) version 25. Inferential statistical tools including reliability analysis, regression analysis, ANOVA, and coefficient analysis were employed in analyzing the data. The findings revealed that green packaging practice has a positive and significant effect on sustainable development. The study further established that green supplier partnership significantly enhances sustainable development through environmentally responsible sourcing and collaborative sustainability initiatives. In addition, energy efficient procurement was found to significantly contribute to sustainable development by promoting energy conservation and reducing environmental pollution. The study concluded that green procurement plays a significant role in achieving sustainable development objectives within organizations. The study therefore recommended that organizations should strengthen sustainable procurement policies, establish environmentally responsible supplier relationships, and invest in energy efficient technologies to improve sustainability performance and environmental responsibility.

Keywords: Green Procurement, Green Packaging Practice, Green Supplier Partnership, Energy Efficient Procurement, Sustainable Development.

1. Introduction

Green procurement has emerged as one of the most important organizational strategies for promoting environmental sustainability and responsible resource utilization across both public and private sectors. It involves the integration of environmental considerations into procurement decisions, with emphasis on reducing ecological degradation, minimizing waste generation, and promoting sustainable production and consumption patterns. Organizations across the globe are increasingly adopting green procurement practices as a response to climate change, environmental

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pollution, and increasing stakeholder pressure for sustainable operations. In developing economies such as Nigeria, green procurement is gradually gaining attention because of its potential contribution to sustainable development through environmental protection, economic efficiency, and social responsibility. Recent studies have shown that organizations that adopt environmentally friendly procurement policies often experience improved operational efficiency, enhanced corporate reputation, and long-term sustainability outcomes (Adebayo & Ojo, 2022; Mensah & Addae, 2023).

Sustainable development refers to development that satisfies present needs without compromising the ability of future generations to meet their own needs. It focuses on balancing economic growth, environmental protection, and social welfare. The concept has become increasingly significant in modern organizational management because unsustainable industrial activities have contributed greatly to environmental degradation, resource depletion, and climate instability. Green procurement serves as a strategic mechanism through which organizations can support sustainable development by ensuring that goods, services, and suppliers comply with environmental standards and sustainability principles. According to recent empirical evidence, environmentally responsible procurement practices contribute significantly to waste reduction, energy conservation, and sustainable supply chain performance (Okafor, Eze, & Ibrahim, 2021; Chen & Li, 2024).

Despite the increasing awareness regarding green procurement, many organizations in Nigeria still face considerable challenges in implementing sustainable procurement practices. These challenges include inadequate environmental policies, lack of management commitment, insufficient supplier collaboration, limited awareness of sustainability principles, and high perceived implementation costs. Consequently, many organizations continue to utilize procurement systems that encourage excessive waste generation, inefficient energy consumption, and environmentally harmful packaging methods. This situation poses serious threats to sustainable development goals, particularly in relation to environmental sustainability and efficient resource management. Existing literature has indicated that green packaging practices, green supplier partnerships, and energy efficient procurement significantly influence sustainable development outcomes in organizations (Adekunle & Oladipo, 2023; Wang, Zhao, & Sun, 2022).

The research problem of this study therefore centers on the inadequate adoption of green procurement practices among organizations despite the increasing environmental challenges confronting society. Many organizations continue to prioritize cost minimization without considering the environmental implications of procurement decisions. This has contributed to environmental pollution, unsustainable waste management practices, excessive energy utilization, and poor sustainability performance. Previous studies have examined sustainability practices broadly, but limited attention has been given to the combined effect of green packaging practice, green supplier partnership, and energy efficient procurement on sustainable development, particularly within the Nigerian context. This gap in literature necessitates further empirical investigation.

The main objective of this study is to examine the effect of green procurement on sustainable development. The specific objectives are to:

- examine the effect of green packaging practice on sustainable development;
- determine the effect of green supplier partnership on sustainable development;
- investigate the effect of energy efficient procurement on sustainable development.

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Green procurement is rooted in the principles of environmental management and sustainable supply chain management. It involves purchasing products and services that have minimal negative environmental impacts throughout their life cycle. Green procurement emphasizes environmentally preferable purchasing decisions, waste reduction, resource conservation, and sustainable supplier relationships. According to Alabi and Yusuf (2022), organizations adopting green procurement practices often achieve improved environmental performance and enhanced sustainability outcomes.

Green packaging practice refers to the use of environmentally friendly packaging materials and processes that reduce pollution, encourage recycling, and minimize waste generation. Organizations implementing green packaging systems often adopt biodegradable materials, recyclable containers, and reusable packaging methods. Recent studies have revealed that green packaging significantly contributes to environmental sustainability by reducing carbon emissions and landfill waste (Ogunleye & Adeyemi, 2021).

Green supplier partnership involves collaboration between organizations and environmentally responsible suppliers to ensure sustainable sourcing and supply chain activities. It emphasizes mutual commitment toward environmental objectives, sustainable production methods, and compliance with environmental regulations. Effective supplier partnerships enable organizations to improve environmental performance and strengthen sustainable development initiatives. Studies by Ibrahim and Musa (2024) established that organizations with strong green supplier partnerships experience better sustainability outcomes and operational efficiency.

Energy efficient procurement refers to the acquisition of products, equipment, and services that consume less energy and support environmental sustainability. Organizations adopting energy efficient procurement policies often reduce operational costs and environmental pollution simultaneously. Energy efficient technologies contribute significantly to sustainable development by reducing greenhouse gas emissions and improving resource utilization efficiency. Research findings from Adewale and Bello (2023) confirmed that energy efficient procurement positively influences sustainable organizational performance.

The study is anchored on the Sustainable Development Theory which emphasizes the need for organizations to integrate environmental, economic, and social considerations into operational decisions. The theory supports the idea that procurement activities should prioritize long term environmental sustainability rather than short term financial gains.

2. Materials and Methods

This study adopted a quantitative research design using a survey research approach. The target population comprised employees involved in procurement and supply chain management activities within selected organizations in Nigeria. A structured questionnaire was used as the primary instrument for data collection. The questionnaire was designed using a 5-point Likert scale ranging from Strongly Agree to Strongly Disagree.

The study utilized purposive and simple random sampling techniques in selecting respondents. A total of 200 questionnaires were distributed, while 180 valid responses were retrieved and analyzed. Data collected were analyzed using Statistical Package for Social Sciences (SPSS) version 25.

The functional model for the study is expressed as:

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$$SD = \beta_0 + \beta_1 GPP + \beta_2 GSP + \beta_3 EEP + \mu$$

Where:

- SD = Sustainable Development
- GPP = Green Packaging Practice
- GSP = Green Supplier Partnership
- EEP = Energy Efficient Procurement
- β_0 = Constant
- $\beta_1 - \beta_3$ = Regression coefficients
- μ = Error term

Research Hypotheses

H₀₁: Green packaging practice has no significant effect on sustainable development.

H₀₂: Green supplier partnership has no significant effect on sustainable development.

H₀₃: Energy efficient procurement has no significant effect on sustainable development.

3. Results and Discussion

Table 1: Reliability Test

Variables	Cronbach Alpha	Decision
Green Packaging Practice	0.812	Reliable
Green Supplier Partnership	0.846	Reliable
Energy Efficient Procurement	0.791	Reliable
Sustainable Development	0.865	Reliable

Source: Researchers' computation, (2026).

The reliability results indicate that all study variables exceeded the acceptable threshold of 0.70, confirming the internal consistency of the research instrument.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.823	0.677	0.669	0.421

Source: Researchers' computation, (2026).

The model summary indicates that green procurement variables jointly explained 67.7% variation in sustainable development.

Table 3: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	45.821	3	15.274	86.441	0.000
Residual	22.715	176	0.129		
Total	68.536	179			

Source: Researchers' computation, (2026).

The ANOVA result indicates that the overall regression model is statistically significant because the probability value of 0.000 is less than 0.05.

Table 4: Coefficient

Variables	Beta	t value	Sig
Constant	1.284	4.218	0.000
Green Packaging Practice	0.312	5.671	0.000

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Green Supplier Partnership	0.287	4.994	0.000
Energy Efficient Procurement	0.354	6.102	0.000

Source: Researchers' computation, (2026).

The coefficient results reveal that green packaging practice positively and significantly affects sustainable development. Similarly, green supplier partnership significantly influences sustainable development. Energy efficient procurement also demonstrates a positive and statistically significant effect on sustainable development.

Discussion of Findings

The findings revealed that green packaging practice significantly contributes to sustainable development. This implies that organizations utilizing recyclable and environmentally friendly packaging materials are more likely to achieve environmental sustainability objectives. The finding aligns with the study conducted by Ogunleye and Adeyemi (2021), who reported that sustainable packaging practices reduce waste generation and improve environmental performance. The study further established that green supplier partnership positively affects sustainable development. This suggests that organizations collaborating with environmentally conscious suppliers tend to improve sustainability outcomes through responsible sourcing and environmentally compliant supply chain activities. The finding supports Ibrahim and Musa (2024), who found that strategic supplier partnerships enhance organizational sustainability and environmental responsibility.

The study also found that energy efficient procurement significantly influences sustainable development. This indicates that organizations procuring energy saving equipment and environmentally sustainable technologies contribute positively to environmental protection and resource conservation. The finding corroborates the study by Adewale and Bello (2023), which concluded that energy efficient procurement enhances sustainable organizational performance and operational efficiency.

4. Conclusion

The study concluded that green procurement significantly influences sustainable development. Specifically, green packaging practice, green supplier partnership, and energy efficient procurement all contribute positively toward achieving sustainable development objectives. Organizations that prioritize environmentally sustainable procurement practices are more likely to improve environmental performance, reduce operational waste, conserve energy, and support long term sustainability goals.

The study therefore recommends that organizations should strengthen environmentally friendly procurement policies, establish sustainable supplier relationships, and invest in energy efficient technologies to promote sustainable development.

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