

Original Article

Green Procurement and Economic Development of Nigeria

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Abstract - This study investigates the impact of green procurement on economic development in Nigeria. Green procurement defined as the integration of environmental criteria into purchasing and supply decisions is assessed as a strategic driver of sustainable growth of a country. The study surveys 150 Chief Procurement Officers and management staff from selected listed manufacturing organizations in Nigeria, from a population of 240, using Yamane's formula. Data were collected through structured questionnaires and analyzed using Descriptive Statistics, Pearson Correlation, and Regression Analysis (SPSS version 25). Three hypotheses test the relationship between green procurement and GDP growth, employment generation, and export performance. Results show that green procurement has a significant positive effect on all the three indicators. The findings show that, apart from improving environmental outcomes, green procurement supports economic growth through cost efficiency, enhanced competitiveness, and innovation. The study recommends implementing comprehensive green procurement policies, offering incentives for sustainable suppliers, and investing in capacity-building initiatives to strengthen green procurement adoption across industries in Nigeria.

Keywords - Green Procurement, Economic Development, Sustainability, Environmental Policy, Nigeria.

1. Introduction

Global environmental challenges such as climate change, resource depletion, and pollution have made sustainability a top priority for policymakers and business leaders worldwide. Among the various sustainability strategies, green procurement has emerged as a strategic tool that integrates environmental considerations into purchasing decisions, thereby reducing ecological footprints and fostering long-term economic growth (Nduji, Orji, & Oriaku, 2024). In many developed economies, green procurement has been institutionalized and is credited with driving innovation, enhancing efficiency, and boosting competitiveness in global markets (Etolue et al, 2025).

In the Nigerian context, procurement practices remain largely cost-driven, with limited emphasis on environmental or social sustainability criteria (Ajike, Nwaulune, Olubiyi, & Bamidele, 2024). This has contributed to inefficiencies such as excessive waste generation, higher carbon emissions, and over-dependence on non-renewable resources. These challenges have macroeconomic implications, including higher production costs, declining export competitiveness, and missed opportunities for creating jobs in emerging green sectors (Sajuyigbe et al., 2024). A transition toward green procurement could mitigate these challenges and position Nigeria to benefit from the growing global demand for sustainably produced goods.

The economic relevance of procurement in Nigeria cannot be emphasized. Public procurement alone accounts for nearly 30% of Nigeria's GDP, making it one of the most powerful levers for promoting sustainable industrial growth (Federal Government of Nigeria, 2023). Evidence from South Africa shows that green economy sectors—including renewable energy and sustainable manufacturing are already contributing substantially to GDP growth (Etolue et al, 2025). Similarly, a recent pan-African report projects that the green economy could generate 3.3 million jobs across



Africa by 2030, positioning countries like Nigeria for significant economic gains if green procurement practices are fully adopted (Lwesya, 2025).

Despite these prospects, empirical research linking green procurement to macroeconomic indicators such as GDP growth, employment creation, and export performance remains scarce in Nigeria. Most available studies emphasize firm-level benefits such as cost savings and corporate reputation enhancement, leaving a gap in understanding how green procurement translates to national economic outcomes (Runtuk et al, 2024; Balin and Balin, 2025).

This study therefore seeks to fill that gap by investigating the relationship between green procurement and economic development in Nigeria, focusing on three key indicators: GDP growth, employment generation in green sectors, and export competitiveness. The main objective of this study is to investigate the effect of Green Procurement on economic development of a country. The specific objectives include the following:

- i. To find out if green procurement has significant effect on GDP growth of a country.
- ii. To investigate if green procurement has significant effect on employment generation in a country.
- iii. To determine if green procurement enhances export performance.

The hypotheses of this study include the following:

H1: Green procurement significantly affects GDP growth.

H2: Green procurement significantly influences employment generation.

H3: Green procurement practices significantly enhance export performance.

The findings of this study provide empirical evidence that supports policy formulation, capacity-building initiatives, and the creation of comprehensive green procurement frameworks that align with Nigeria's long-term economic and environmental objectives.

2. Literature Review

2.1. Conceptual Review

Green procurement refers to the process of integrating environmental and sustainability considerations into purchasing decisions to minimize the negative impacts of goods, services, and works across their entire life cycles (OECD, 2025). Unlike conventional procurement, which is primarily cost-driven, green procurement emphasizes life-cycle value, environmental performance, and resource efficiency in supplier selection, contract management, and material usage (Liu et al., 2024). It entails choosing products and services that are recyclable, energy-efficient, and sourced from sustainable materials, thereby reducing greenhouse gas emissions, conserving natural resources, and promoting circular economy practices (Stoffel et al., 2019).

The Key components of green procurement according to Sajuyigbe et al, (2024), include the following:

1. Environmental Criteria in Tendering: Requiring suppliers to meet standards such as ISO 14001 or use eco-friendly materials.
2. Life Cycle Costing: Evaluating not just purchase price but costs over the entire product life cycle, including disposal and environmental impact.
3. Supplier Development: Building capacity of local suppliers to meet sustainability standards, thereby generating employment and increasing competitiveness.

In Africa, where economic growth is often fueled by extractive industries and energy-intensive manufacturing, unsustainable procurement practices significantly contribute to environmental degradation, inefficient energy use, and pollution (Kyalo, 2024). Green procurement offers a strategic opportunity to transition toward low-carbon, resource-efficient growth by encouraging local industries to adopt cleaner production methods and sustainable sourcing practices (Ngouapegne et al., 2024). This transition is aligned with the African Union's Agenda 2023, which calls for inclusive and environmentally sustainable development across the continent (Panya & Ochiri, 2025).

2.2. Green Procurement and Economic Development

Economic development involves the sustained improvement of citizens' economic, political, and social well-being beyond GDP growth, encompassing structural transformation, job creation, industrial diversification and equitable distribution of wealth (World Bank, 2025). Green procurement contributes to this process by creating market demand for sustainable products and services, stimulating innovation, and driving local firms to upgrade production processes to meet global standards (Mary & Chege, 2024). Evidence shows that firms that implement green procurement achieve significant cost savings, improve resource efficiency, and enhance their competitiveness in export markets (Kimario et al., 2023).

In developing economies like Nigeria, procurement constitutes nearly 30% of GDP, suggesting that greener procurement processes could generate substantial economic spillovers (Federal Government of Nigeria, 2023). Green procurement thus acts as a catalyst for economic diversification by encouraging investment in renewable energy, recycling, and cleaner production technologies.

The link between green procurement and GDP growth is supported by the resource efficiency model, which posits that the optimal use of natural resources results in higher productivity and economic output (OECD, 2024; Carrasco et al., 2024). By reducing waste, minimizing energy consumption, and adopting eco-innovations, firms are able to lower production costs, increase profit margins, and contribute positively to national GDP (Liu et al., 2024). A recent study in South Africa demonstrated that organizations adopting green procurement practices achieved measurable operational savings and reinvested the cost savings into capacity-building and innovation (Ngouapegne et al., 2024).

Green procurement has also been linked to job creation through the development of green value chains. According to the International Labour Organization, the global shift to a green economy could create 24 million jobs by 2030, with Africa benefiting significantly from opportunities in sustainable agriculture, waste management, and renewable energy (ILO, 2025). In Nigeria, adopting green procurement could stimulate demand for professionals in environmental compliance, eco-product design, and green supply chain management, aligning with Sustainable Development Goal 8 (decent work and economic growth) (World Bank, 2025).

2.3. Green Procurement and Export Performance

Export performance is increasingly shaped by compliance with sustainability standards. Firms and countries that fail to meet environmental criteria risk exclusion from key markets, particularly the European Union, where the Carbon Border Adjustment Mechanism (CBAM) has come into effect (European Commission, 2024). Green procurement helps manufacturers align with such regulations by embedding sustainability requirements into sourcing and production processes, thereby increasing their acceptance in environmentally conscious markets (Mary & Chege, 2024). According to Chukwuemeka and Adeyemi, (2025), Nigerian firms that adopted green procurement practices experienced 17% increase in exports to markets within a period of three years.

African economies are uniquely positioned to leverage green procurement for inclusive and sustainable development, as they are still in the early stages of industrialization and infrastructure development. This provides an opportunity to integrate sustainability principles into new investments, avoiding the costly retrofitting of polluting infrastructure (Kyalo, 2024). Nigeria, with its growing manufacturing base and large consumer market, can lead West Africa in creating a green procurement framework that promotes innovation, attracts climate finance, and reduces dependence on fossil fuels (IISD, 2025).

Table 1: Green Procurement and Economic Development Initiatives in Five African Countries

| Country | Organization | Green Procurement/ Environmental Initiative | Year/Period | Economic Development Contribution |
|---------|--------------------|---|-------------|---|
| Nigeria | Dangote Cement PLC | Adoption of alternative fuel and biomass in cement kilns to reduce CO ₂ emission and | 2023-2025 | Reduced energy cost by 15%, created over 500 new green jobs and contributed to Nigeria's Nationally |

| | | energy cost | | Determined Contributions (NDC) for Carbon reduction. |
|---------------------|--------------------------------------|---|-----------|---|
| South Africa | Wool Worths Holdings | Green Supply Chain Programme emphasizing sustainable farming, reduced water use, and ethical sourcing | 2004 | Boosted agricultural exports, improved farmers income, and enhanced competitiveness of South African produce internationally. |
| Egypt | Commercial International Bank (CIB) | Introduction of Green Bond Programme for financing eco-friendly procurement projects | 2024-2025 | Mobilized \$150 million for sustainable infrastructure, driving Egypt's Green Economy Transition |
| Morocco | Renault Tangier Plant | Zero CO2 Emission vehicle production through use of renewable energy and sustainable materials | 2024 | Increased Morocco's automotive exports by 8%, supported over 2,000 jobs, and enhanced foreign exchange earnings. |
| Burkina Faso | SONABEL National Electricity Company | Procurement of renewable energy components for rural electrification projects | 2024-2025 | Expanded electricity access by 12% in rural communities, driving small-scale enterprise growth and poverty reduction. |

Sources: World Bank (2005); ILO (2025); OECD (2024); UNE (2024)

Considering the information on the above table, green procurement is progressively pivotal to Africa's sustainable development agenda. Analysis across these five countries reveals several important trends:

- **Energy Transition:** Dangote Cement, Sasol, and Electric are spearheading low-carbon production, aligning with national climate policies and reducing fossil fuel dependency.
- **Job Creation and Skills Development:** These initiatives have generated thousands of skilled jobs, boosting local economies and human capital development in some African countries.
- **Trade Performance:** Morocco's Renault Tangier and South Africa's Woolworths show how green procurement can improve product quality and expand exports.
- **Financial Innovation:** Egypt's CIB Green Bond demonstrates how financing instruments can catalyze wider adoption of sustainability initiatives.
- **Social Impact:** SONABEL's rural electrification programme directly supports poverty reduction and local entrepreneurship thereby strengthening rural economies.

In conclusion, green procurement is not only an environmental policy, but also a significant catalyst of industrial growth, job creation, trade competitiveness, and social transformation across Africa. These initiatives collectively demonstrate how sustainability can enhance economic resilience and long-term development of a country.

2.4. Theoretical Review

Two key theories underpin the relationship between green procurement and economic development which are Institutional Theory and Stakeholder Theory.

2.4.1. Institutional Theory

According to institutional theory, organizational practices are shaped by external pressures such as regulations, cultural norms, and stakeholder expectations. Nigerian companies may adopt green procurement as a response to governmental policies, global market requirements, and societal demands for environmental responsibility (Olatunji & Musa, 2024).

Institutional theory asserts that organizational behavior is significantly shaped by institutional pressures, including regulatory frameworks, societal expectations, and industry norms. In the context of green procurement, institutional theory explains how organizations adopt sustainable practices due to coercive (regulatory), mimetic (peer

influence), and normative (societal values) pressures (Ibrahim & Salami, 2025). Governments play a pivotal role in setting environmental standards and regulations that drive organizations toward sustainable procurement. International agreements and national environmental policies often dictate compliance, pushing both public and private sector organizations to align with green practices.

This theory is especially relevant in developing countries, where global environmental commitments and donor funding increasingly require environmentally responsible procurement systems. By complying with such institutional expectations, countries not only protect the environment but also improve their international reputation and attract sustainable foreign investment.

2.4.2. Stakeholder Theory

Stakeholder theory states that organizations must consider the interests and expectations of all stakeholders, and not just shareholders in their decision-making processes. In the green procurement context, stakeholders include government agencies, customers, suppliers, communities, and environmental advocacy groups (Olatunji & Oduwale, 2025). Stakeholder theory explains that companies that respond to environmental concerns raised by these groups can enhance their legitimacy, reputation, and long-term profitability.

Organizations that proactively adopt green procurement not only gain customer trust but also contribute to broader developmental goals, such as job creation in green industries and improved public health. This stakeholder-oriented approach creates value for all parties and reinforces the link between green procurement and sustainable economic growth.

2.5. Empirical Review

Empirical studies in recent years have strengthened the link between green procurement and economic development, particularly in developing economies such as Nigeria. These studies collectively indicate that green procurement improves resource efficiency, stimulates innovation, drives job creation, and enhances global competitiveness.

Ayewumi (2023) investigated sustainable procurement practices in Nigerian public institutions using a survey of 320 procurement officers. The study revealed that integrating environmental standards into procurement processes significantly reduced government procurement costs by 8%, enabling reallocation of savings to infrastructure and social services. Similarly, Kimario et al. (2023), in a study of 85 Tanzanian manufacturing firms, found that green procurement adoption led to reduced material waste, lower energy use, and a 12% increase in operational efficiency, indicating a positive correlation between sustainable sourcing and firm-level productivity.

In a meta-analysis, Liu et al. (2024) examined 45 empirical studies across Asia and Africa and reported that green procurement had the strongest direct effect on short-term operational and financial performance compared to other green supply chain practices. The study emphasized the importance of life-cycle costing and supplier collaboration in maximizing economic and environmental returns. Ngouapegne (2024) corroborated these findings in a South African context, showing that firms reinvested cost savings from green procurement into research and development (R&D) and workforce training, leading to innovation-driven growth.

Similarly, Mary and Chege (2024) focused their study on export competitiveness in African manufacturing and demonstrated that firms adopting green procurement were 30% more likely to access EU markets after the enforcement of the Carbon Border Adjustment Mechanism (CBAM). This finding underlines the importance of aligning procurement practices with international environmental standards to enhance market access and foreign exchange earnings.

In the same vein, Ademeso (2025) explored policy frameworks for sustainable public procurement across Sub-Saharan Africa, arguing that integrating green procurement into national procurement law would attract international climate finance and reduce infrastructure costs by 10–15% over project lifecycles. Panya and Ochiri (2025) examined

Agenda 2063 implementation and concluded that green procurement is a catalyst for inclusive industrialization by incentivizing local suppliers to adopt cleaner technologies, thus generating quality jobs and reducing poverty levels.

In another study, Runtuk et al. (2025) conducted a systematic review of eco-procurement in public infrastructure projects and reported that projects with sustainability clauses created more local employment and improved community welfare outcomes than those without such clauses. The International Labour Organization (ILO, 2025) also forecast that transitioning to a green economy could generate 24 million jobs globally by 2030, with Africa expected to see significant gains in renewable energy, sustainable agriculture, and waste management.

Nduji, Orji, and Oriaku (2024) examined green business practices among manufacturers in Kano and reported that adoption of environmentally oriented purchasing and waste-reducing measures significantly improved cost efficiency and resource use within firms. These operational gains suggest channels through which green procurement could scale to broader economic benefits.

Ajike et al. (2025) conducted a study of fast-moving consumer goods firms in Nigeria and established that green logistics practices are positively associated with financial sustainability. Their findings highlight that supply chain greening (including procurement of sustainable inputs) reduces costs and enhances competitiveness, a plausible pathway toward GDP growth and improved export performance in cleaner production sectors.

In the same vein, Nsowah, et al., (2024) studied hospitals in the Bono Region of Ghana and documented adoption patterns and barriers to green procurement (supplier readiness, regulatory gaps). Where green procurement is adopted, they found measurable operational benefits (reduced waste, lower running costs) reinforcing the view that even in constrained environments, green procurement has tangible local economic benefits (Nsowah et al., 2024).

Similarly, Anin, Etse, & Okyere (2024) analyzed Ghanaian SMEs and found that corporate environmental ethics, environmental training, and strong top-management commitment significantly drive green procurement adoption; this suggests that capacity building and organizational culture are key enablers for scaling up green procurement, thereby improving firm environmental and financial performance.

In addition, Kuruneri (2025) studied sustainable procurement implementation in Botswana's public sector; this research identifies key institutional challenges but also demonstrates that where public procurement frameworks include enforceable sustainability clauses, the implementation increases transparency, local supplier participation, and cost savings. In the same vein, Lwesya (2025) assessed green finance flows across Africa and showed that firms with greater access to green finance, better institutional support, and stronger regulatory frameworks are more likely to meet green procurement criteria implying that green finance is an enabling condition for green procurement to contribute to economic development.

The World Bank (2025) highlighted that Nigeria could unlock additional GDP growth of 1.2% annually by scaling green procurement in manufacturing and public infrastructure projects, underscoring the macroeconomic benefits of the practice.

Despite the growing body of evidence at firm, sectoral, and regional levels, there is still no strong empirical study in Africa that quantifies how green procurement practices across many firms or public agencies translate into national GDP growth, aggregate employment in green sectors, or national export competitiveness.

Most studies do not cover macroeconomic covariates, such as inflation, trade policies, exchange rates, institutional quality in assessing these links. Therefore, there is a clear gap. Large-scale, multi-firm quantitative studies that explicitly test green procurement as an independent predictor of national economic development indicators in African contexts are sparse.

The present study aims to fill this gap by deploying representative survey data and regression analyses to assess how green procurement relates to GDP growth, employment, and export performance in Nigeria.

3. Materials and Methods

This study employed a descriptive survey research design to quantitatively assess the relationship between green procurement and economic development in Nigeria. The population comprised two hundred and forty (240) Chief Procurement Officers and management staff from selected listed manufacturing organizations in Lagos, Ogun and Rivers states. A stratified random sampling method was used to select 150 respondents as a sample size, following Yamane's formula to ensure a representative sample. Questionnaire was the instrument used for data collection. The questionnaire was divided into sections covering demographic data perception of green procurement practice, economic performance indicators (e.g., GDP contribution, employment figures, and export volume) and implementation challenges.

The data were analyzed using descriptive statistics to summarize demographic and baseline data. Pearson correlation was used to examine relationship between green procurement practices and economic outcomes, and regression analysis was used to test the three hypotheses. Statistical analysis was performed using SPSS version 25 with a significance level set at 0.05.

4. Results and Discussion

4.1. Data Presentation and Analysis

Table 2: Demographic Profile of Respondents

| Variable | Frequency | Percentage |
|-------------|-----------|------------|
| Male | 90 | 60% |
| Female | 60 | 40% |
| BSc/HND | 100 | 66.7% |
| MSc & Above | 50 | 33.3% |

Interpretation: From table 2, the sample comprised 150 respondents, with 60% male and 40% female participation, indicating moderate gender balance. Two-thirds (66.7%) held BSc/HND qualifications, while 33.3% held MSc or higher, reflecting a relatively educated respondent pool. The distribution on the table shows that respondents were knowledgeable enough to provide informed responses on procurement practices, strengthening the reliability of findings.

Table 3: Descriptive Statistics for Green Procurement Practices

| Item | Mean | SD |
|-----------------------------|------|-----|
| Green materials usage | 4.2 | 0.6 |
| Waste reduction in purchase | 4.0 | 0.7 |
| Supplier eco-compliance | 3.9 | 0.8 |

Interpretation: In table 3, the mean scores indicate a high level of green procurement practice among sampled firms. Green materials usage (Mean = 4.2) was most common, followed by waste reduction in purchase (Mean = 4.0) and supplier eco-compliance (Mean = 3.9). The relatively low standard deviations indicate response consistency. The results imply that green procurement is well embedded in sampled organizations, providing a solid foundation for its hypothesized economic effects.

4.2. Hypothesis Testing

H1: Green procurement significantly affects GDP growth.

Table 4: Regression Analysis for H1

| Model | Beta | T-Value | P-Value |
|-------------------|------|---------|---------|
| Green Procurement | 0.58 | 6.23 | 0.000 |

Interpretation: The regression analysis in table 4 produced a Beta = 0.58, $t = 6.23$, $p < 0.001$. This shows a strong, positive, and significant effect of green procurement on GDP growth. The result supports Adebayo & Hassan (2024), who found that sustainable procurement fosters industrial innovation and drives GDP expansion.

H2: Green procurement significantly influences employment generation.

Table 5: Regression Analysis for H2

| Model | Beta | T-Value | P-Value |
|-------------------|------|---------|---------|
| Green Procurement | 0.49 | 5.02 | 0.001 |

Interpretation: The regression analysis in table 5 yielded Beta = 0.49, $t = 5.02$, $p = 0.001$, confirming a statistically significant positive impact. The result aligns with study conducted by Okafor & Bello (2025), who reported that green initiatives generate employment in renewable energy, waste management, and eco-friendly manufacturing sectors.

Table 6: Regression Analysis for H3

| Model | Beta | T-Value | P-Value |
|-------------------|------|---------|---------|
| Green Procurement | 0.62 | 7.01 | 0.000 |

Interpretation: The regression results in table 6 show Beta = 0.62, $t = 7.01$, $p < 0.001$, the strongest of all relationships tested. This corroborates Chukwu & Nwachukwu (2025), who found that eco-compliance improves international market access by meeting global environmental standards.

4.3. Discussion

The analysis reveals that green procurement has a statistically significant positive impact on key economic indicators in Nigeria's manufacturing sector:

- GDP Growth (H1): A beta value of 0.58 demonstrates that as green procurement practices increase, GDP growth significantly improves. This finding confirms previous studies by (Adebayo & Hassan, 2024), affirming that sustainable procurement fosters industrial innovation, leading to economic expansion.
- Employment Generation (H2): With a beta value of 0.49, the data indicate that green procurement encourages job creation, particularly in industries focused on renewable energy, recycling, and sustainable manufacturing. This substantiates the view that green practices are instrumental in generating new employment opportunities. This finding is supported by Okafor and Bello (2025), who reported that green initiatives generate employment in renewable energy, waste management, and eco-friendly manufacturing sectors.
- Export Performance (H3): The strongest relationship was observed with export performance, as indicated by a beta value of 0.62. Firms adopting green procurement practices tend to achieve higher compliance with international standards, making their products more competitive in global markets. This finding is in line with research by Chukwu & Nwachukwu (2025) and further affirmed by the study of Emeka & Gambo (2025).
- These results underscore that green procurement is a multifaceted tool that not only mitigates environmental impacts but also drives economic development by enhancing efficiency, competitiveness, and market access.

4.3.1. Findings

Findings of this study revealed the following:

- Green procurement practices have a significant positive impact on GDP growth in Nigeria.
- Adoption of sustainable procurement methods fosters employment, especially in green and innovative sectors.
- Firms implementing green procurement tend to be more competitive in export markets, indicating better global market alignment.
- In general, green procurement is a viable strategy for promoting sustainable economic development of a country.

5. Conclusion

Green procurement defined as the process of acquiring goods, works and services with a reduced environmental impact throughout their life cycle when compared with alternatives that serve the same purpose is far more than an environmental initiative. It is also a strategic economic tool. In Nigeria, the adoption of green procurement in the manufacturing sector has been shown to reduce operational costs, stimulate job creation, and enhance export performance. Despite initial challenges in awareness and policy implementation, the long-term benefits include improved economic growth and enhanced global competitiveness.

This study demonstrates that aligning procurement processes with sustainability goals can contribute significantly to a country's economic development. Policy-makers and industry leaders must recognize the dual benefits of green procurement and work collaboratively to institutionalize these practices.

The study is important and highly relevant as it demonstrates how green procurement serves as both an environmental safeguard and a catalyst for economic transformation in Africa. By examining prominent companies across Nigeria, South Africa, Egypt, Morocco, and Burkina Faso, the paper highlights how sustainable procurement practices contribute to energy transition, job creation, rural electrification, and export competitiveness.

Findings of this study are timely, given Africa's urgent need to balance industrial growth with environmental responsibility, and they provide actionable insights for policymakers, businesses, and international investors seeking to align with the Sustainable Development Goals (SDGs) and national climate commitments. Ultimately, the study underscores that green procurement is not only a sustainability strategy but also a pathway toward resilient economic development across the continent.

6. Recommendations

Based on findings, the following recommendations are proffered:

- National and regional governments should develop clear policies and regulations that mandate or incentivize green procurement practices for both public and private sector organizations.
- Training sessions and capacity-building programmes should be organized for procurement officers at regular interval to enhance their understanding of life-cycle costing, environmental certification, and sustainable supplier management.
- Stakeholder collaboration is also necessary by encouraging partnerships between government agencies, industry associations, and international organizations to share best practices and create unified standards for green procurement.
- Implementation of robust systems for monitoring the effectiveness of green procurement practices and evaluates their economic impact continuously, ensuring transparency and accountability.

Conflict of Interest

The authors hereby declared that there is no conflict of interest regarding the publication of this paper.

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