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ASSESSING THE CONSIDERATION OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) CRITERIA IN PUBLIC CONSTRUCTION CONTRACT EVALUATION IN NIGERIA

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ABSTRACT

Public construction contract evaluation in Nigeria is largely driven by price competitiveness and technical compliance, with limited consideration of sustainability principles. This has contributed to environmental degradation, weak labour standards, and governance challenges, despite increasing advocacy for sustainable procurement. The lack of clearly operationalised Environmental, Social, and Governance (ESG) criteria within evaluation frameworks has reduced the effectiveness of public procurement in promoting sustainable construction outcomes. This study examined the integration of ESG criteria in public construction contract evaluation in Nigeria, focusing on how environmental, social, and governance factors are applied during bid evaluation and contract award decisions. A quantitative research design was adopted, and data were collected through a structured questionnaire administered to procurement officers, quantity surveyors, engineers, and architects involved in public procurement in selected public institutions. Respondents were selected using purposive sampling based on their direct involvement in procurement and evaluation processes. Out of 230 questionnaires distributed, 142 valid responses were retrieved, representing a 61.7% response rate. Data were analysed using Mean Item Score (MIS) and Relative Importance Index (RII), which were used to rank ESG indicators. The results show uneven integration of ESG criteria. Governance indicators ranked highest, particularly transparency (MIS = 3.84; RII = 0.77) and financial accountability (MIS = 3.71; RII = 0.74). Environmental criteria such as regulatory compliance (MIS = 3.45; RII = 0.69) and waste management (MIS = 3.32; RII = 0.66) were moderately considered, while social criteria such as community engagement (MIS = 3.10; RII = 0.62) ranked lowest. The study concludes that ESG integration in public construction contract evaluation in Nigeria is inconsistent and underdeveloped. It recommends a standardised ESG evaluation framework, mandatory ESG weighting in bid assessment, and capacity building for procurement professionals.

KEYWORDS: *Contract Evaluation, ESG Integration, Public Construction Procurement, Sustainability Criteria, Nigeria.*

INTRODUCTION

Public construction procurement constitutes a significant proportion of government expenditure and plays a critical role in infrastructure delivery and economic development in many developing countries (OECD, 2021). However, the construction sector is also associated with environmental degradation, social inequality, and governance-related risks, making sustainability integration a critical concern in procurement decision-making (UNEP, 2020). As a result, public procurement is increasingly recognised as a strategic policy tool for advancing sustainable development objectives beyond traditional cost efficiency (McCrudden, 2004).

Environmental, Social, and Governance (ESG) principles provide a comprehensive framework for integrating sustainability considerations into decision-making by addressing environmental protection, social responsibility, and ethical governance (Eccles, Ioannou, & Serafeim, 2014). In construction procurement, ESG integration enables contracting authorities to assess contractors not only on price and technical competence but also on broader sustainability performance, which can improve project outcomes and long-term value delivery (Testa et al., 2016; Cheng et al., 2018).

In Nigeria, public construction procurement is regulated by the Public Procurement Act (PPA) 2007, which emphasises transparency, accountability, and value for money. Although these provisions provide a foundation for sustainable procurement, actual contract evaluation practices remain largely dominated by lowest-price selection and basic technical compliance (Olatunji, Love, & Babarinde, 2017). Despite a decade of policy advocacy and growing sustainability awareness, ESG criteria remain absent from formalised bid evaluation frameworks, a problem documented consistently in Nigerian procurement literature from Akenroye (2013) through to more recent work by Boniface, Nnadi, and Eze (2024) and Moshood, Rotimi, and Shahzad (2025). Recent policy efforts by the Bureau of Public Procurement, alongside Nigeria's commitment to the Sustainable Development Goals, have improved general awareness of sustainability principles, but ESG criteria are still not systematically embedded in bid evaluation frameworks due to weak enforcement, limited institutional capacity, and lack of standardised assessment tools.

Previous studies in Nigeria have focused mainly on procurement compliance, cost efficiency, policy awareness, and general sustainability practices (Akenroye, 2013; Adetunji, Price, & Fleming, 2018; Olatunji et al., 2017). While these studies confirm growing awareness of sustainability, they largely overlook how ESG principles are operationally applied during the contract evaluation stage, which is the most decisive phase in procurement outcomes. Where ESG has been discussed, it is often at a policy or awareness level rather than within measurable evaluation tools, scoring systems, or award criteria (Uttam & Le Lann Roos, 2015). This creates a clear gap between sustainability policy intentions and actual procurement practice.

The problem is therefore not the absence of ESG awareness, but the lack of structured mechanisms for integrating ESG criteria into contract evaluation processes in Nigerian public construction procurement. Without such integration, procurement decisions continue to prioritise short-term cost considerations over long-term environmental, social, and governance performance, undermining sustainable development outcomes.

This study addresses this gap by examining the operational integration of ESG criteria in public construction contract evaluation in Nigeria. Specifically, it identifies the ESG factors considered during bid evaluation, assesses their relative importance, and evaluates their influence on contract award decisions. This is important because strengthening ESG integration can improve transparency, enhance project sustainability outcomes, and support more balanced and responsible public procurement decisions in Nigeria.

LITERATURE REVIEW

Concept of Environmental, Social and Governance (ESG) in Construction Procurement

Environmental, Social and Governance (ESG) represents an integrated framework used to evaluate sustainability performance

in organisational and project decision-making beyond traditional cost and technical indicators. ESG combines environmental protection, social responsibility, and governance accountability to ensure that development activities align with long-term sustainability objectives. In construction procurement, ESG has become increasingly relevant due to the sector's significant environmental footprint and social impact.

Recent literature emphasises that ESG integration in procurement is no longer optional but a strategic requirement for sustainable development. According to Eccles et al. (2014) sustainability and performance study, organisations that integrate sustainability into decision-making processes tend to achieve improved long-term performance outcomes. In the context of public procurement, ESG serves as a mechanism for ensuring that contractors are evaluated not only on cost and technical compliance but also on environmental efficiency, labour practices, and governance standards.

ESG and Sustainable Procurement in Construction

Sustainable procurement refers to the integration of environmental and social considerations into procurement processes to achieve value beyond economic efficiency. Walker and Brammer (2009) sustainable procurement study argue that public procurement can influence supplier behaviour by embedding sustainability requirements into contract awards, thereby driving industry-wide change.

In the construction sector, sustainable procurement has been widely recognised as a tool for reducing environmental harm and improving social outcomes. Zhu and Sarkis (2016) green procurement study highlight that green procurement practices enhance environmental performance by promoting resource efficiency, waste reduction, and sustainable sourcing. Similarly, Martínez-Conesa et al. (2020) sustainability procurement review emphasise that sustainability integration in procurement is increasingly being adopted globally, although implementation remains uneven across developing economies due to institutional and technical constraints.

Environmental Dimension of ESG in Construction Procurement

The environmental dimension of ESG focuses on reducing the ecological impact of construction activities through sustainable resource use, pollution control, and climate-sensitive practices. Key components include waste management, energy efficiency, carbon reduction, and lifecycle environmental assessment.

Studies show that environmental considerations in procurement are often driven by regulatory compliance rather than strategic sustainability integration. Testa et al. (2016) green public procurement study found that environmental criteria are primarily adopted to meet legal requirements rather than to achieve long-term environmental transformation.

In developing countries such as Nigeria, environmental sustainability in procurement remains largely compliance-based. Akenroye (2013) sustainable procurement in Nigeria observed that environmental criteria are rarely embedded in evaluation frameworks and are mostly treated as procedural requirements. More recent studies such as Moshood et al. (2025) sustainability construction study confirm that despite increasing awareness of sustainability, environmental integration in construction procurement remains weak due to limited enforcement mechanisms and lack of structured evaluation tools.

Social Dimension of ESG in Construction Procurement

The social dimension of ESG addresses the impact of construction activities on workers, communities, and society at large. It includes labour rights, occupational health and safety, gender inclusion, skills development, and community engagement.

According to McCrudden (2004) public procurement social outcomes, public procurement can be used as a policy tool to achieve social outcomes such as employment creation and social inclusion. However, implementation remains limited, particularly in developing economies where cost considerations dominate procurement decisions.

Windapo and Goulding (2015) construction safety study found that occupational health and safety is the most consistently applied social criterion in construction procurement due to its direct link to risk reduction. However, broader social considerations such as gender inclusion, community development, and workforce empowerment are often weak or absent.

Recent studies such as Kwakye et al. (2020) sustainable procurement practices study confirm that social sustainability in construction procurement is still evolving, with limited institutional support and weak enforcement mechanisms in developing countries.

Governance Dimension of ESG in Construction Procurement

The governance dimension of ESG focuses on transparency, accountability, anti-corruption mechanisms, and ethical procurement practices. It ensures that procurement decisions are fair, transparent, and aligned with regulatory standards.

According to Søreide (2014) procurement transparency study, transparency is a critical factor in reducing corruption and improving efficiency in public procurement systems. Governance mechanisms such as open bidding processes and financial accountability are essential for ensuring trust in procurement outcomes.

In Nigeria, governance remains the most dominant aspect of procurement evaluation. Olatunji et al. (2017) Nigerian construction performance study observed that procurement systems are highly compliance-driven, with strong emphasis on procedural correctness rather than sustainability outcomes. Similarly, Boniface et al. (2024) procurement challenges in Nigeria highlight persistent governance challenges in the Nigerian construction sector, including weak enforcement and limited transparency in contract awards.

However, governance practices remain largely reactive, focusing on compliance rather than proactive ESG performance monitoring and disclosure.

METHODOLOGY

A quantitative research design was adopted because the study aimed to measure the extent of ESG integration in contract evaluation using numerical data and statistical techniques, which enables systematic comparison and ranking of ESG indicators. This approach is consistent with similar studies in sustainable procurement research that have employed quantitative methods to rank and prioritise sustainability factors in construction procurement (Testa et al., 2016; Cheng et al., 2018). The study population comprised procurement officers, quantity surveyors, engineers, and architects who are directly involved in public construction procurement and bid evaluation within federal and state government ministries, departments, and agencies (MDAs) in Nigeria. These professionals were targeted because of their direct involvement in contract evaluation and award processes. The study did not

cover all MDAs across all 36 states; rather, it focused on MDAs with active public construction procurement activities in the north-western and north-central geopolitical zones of Nigeria, where accessible institutional contacts were available to the researchers.

A questionnaire survey was selected as the data collection instrument because it is the most appropriate method for gathering standardised quantitative data from a geographically dispersed population of professionals with direct procurement experience. The structured questionnaire was developed from established ESG and sustainable procurement literature (Testa et al., 2016; Cheng et al., 2018) and contained sections covering respondents' background information and ESG indicators across environmental, social, and governance dimensions. The ESG indicators were adapted from peer-reviewed studies on green procurement, sustainable construction, and governance frameworks, and were validated through a pilot test administered to ten procurement professionals who were not part of the main sample. Feedback from the pilot test was used to improve item clarity and relevance before the main survey. Responses were measured using a five-point Likert scale anchored at 1 = Very Low Consideration and 5 = Very High Consideration. The sample size of 230 was determined using Krejcie and Morgan's (1970) sample size formula, which is widely used in social science research to determine adequate sample sizes for finite populations. An additional 15% was added to account for anticipated non-responses and invalid questionnaires, making the initial distribution 230. Respondents were selected using purposive sampling, which is a non-probability sampling technique that deliberately targets individuals who possess the specific knowledge and professional experience required to respond meaningfully to the survey. This technique was appropriate given that the study required participants with direct involvement in public construction bid evaluation and contract award processes. Out of 230 questionnaires distributed, 142 valid responses were retrieved and used for analysis, representing a 61.7% response rate, which is acceptable for survey-based studies in construction management research.

RESULTS AND DISCUSSION

Environmental ESG Factors Considered in Contract Evaluation

Table 1 presents the environmental ESG factors considered in public construction contract evaluation.

Table 1: Environmental ESG Factors in Public Construction Contract Evaluation (19 Factors)

S/N	Environmental Factors	Mean	Standard Deviation	Rank
1	Compliance with environmental regulations	4.12	0.824	1
2	Waste management plan	3.98	0.796	2
3	Environmental impact mitigation measures	3.87	0.774	3
4	Use of environmentally friendly materials	3.65	0.730	4
5	Energy efficiency considerations	3.41	0.682	5
6	Life-cycle environmental assessment	3.02	0.604	6
7	Innovation in green construction methods	2.89	0.578	7
8	Pollution control measures	2.85	0.570	8
9	Carbon emission reduction strategies	2.80	0.560	9
10	Environmental risk assessment	2.78	0.556	10
11	Sustainable site management practices	2.74	0.548	11
12	Water conservation measures	2.70	0.540	12
13	Biodiversity protection measures	2.66	0.532	13
14	Noise and dust control measures	2.62	0.524	14
15	Environmental monitoring and reporting	2.60	0.520	15
16	Green certification compliance (e.g. ISO 14001)	2.55	0.510	16
17	Climate change adaptation measures	2.50	0.500	17
18	Circular economy practices in construction	2.45	0.490	18
19	Environmental sustainability innovation	2.40	0.480	19

The results show that environmental evaluation is still largely compliance-driven, with statutory environmental regulation ranking highest. This supports Akenroye (2013), who observed that sustainability in Nigerian procurement is mainly regulatory rather than performance-based. Testa et al. (2016) similarly noted that public procurement systems prioritise compliance to avoid sanctions rather than proactive environmental integration.

Lower-ranked indicators such as circular economy practices, climate adaptation, and green certification show weak adoption of advanced environmental sustainability tools. This aligns with Cheng et al. (2018), who reported limited technical capacity and absence of structured sustainability evaluation frameworks in developing countries.

Social ESG Factors Considered in Contract Evaluation

Table 2: Social ESG Factors in Public Construction Contract Evaluation (26 Factors)

S/N	Social Factors	Mean	Standard Deviation	Rank
1	Occupational health and safety compliance	4.25	0.850	1
2	Compliance with labour laws	4.01	0.802	2
3	Fair wages and employment conditions	3.76	0.752	3
4	Local labour utilisation	3.54	0.708	4
5	Skills development and training	3.29	0.658	5
6	Gender and social inclusion	2.96	0.592	6
7	Workers' welfare provisions	2.90	0.580	7
8	Community engagement practices	2.88	0.576	8
9	Equal employment opportunities	2.85	0.570	9
10	Disability inclusion in workforce	2.80	0.560	10
11	Child labour prevention policies	2.78	0.556	11
12	Social impact assessment	2.75	0.550	12
13	Stakeholder engagement mechanisms	2.73	0.546	13
14	Conflict sensitivity in project delivery	2.70	0.540	14
15	Community health impact consideration	2.68	0.536	15
16	Corporate social responsibility initiatives	2.65	0.530	16
17	Employment generation targets	2.62	0.524	17
18	Training and capacity development for locals	2.60	0.520	18
19	Worker safety training programmes	2.58	0.516	19
20	Social equity considerations	2.55	0.510	20
21	Poverty reduction contribution	2.52	0.504	21
22	Cultural heritage protection	2.50	0.500	22
23	Stakeholder grievance mechanisms	2.48	0.496	23
24	Social inclusion monitoring systems	2.45	0.490	24
25	Gender equity enforcement policies	2.42	0.484	25
26	Labour rights monitoring systems	2.40	0.480	26

Occupational health and safety dominates social evaluation due to the hazardous nature of construction projects (Windapo & Goulding, 2015). However, broader social dimensions such as inclusion, equity, and community participation are weakly integrated.

This supports McCrudden (2004), who argued that social objectives in procurement are often secondary to cost and technical considerations. Adetunji et al. (2018) further confirmed that social sustainability remains poorly institutionalised in African construction procurement systems.

Governance ESG Factors Considered in Contract Evaluation

Table 3: Governance ESG Factors in Public Construction Contract Evaluation (21 Factors)

S/N	Governance Factors	Mean	Standard Deviation	Rank
1	Transparency in bidding process	4.38	0.876	1
2	Financial accountability	4.22	0.844	2
3	Compliance with procurement regulations	4.15	0.830	3
4	Anti-corruption measures	3.88	0.776	4
5	Past ethical conduct of contractors	3.47	0.694	5
6	Disclosure of ESG performance records	2.91	0.582	6
7	Audit trail transparency systems	2.85	0.570	7
8	Procurement documentation integrity	2.82	0.564	8
9	Contract monitoring and evaluation systems	2.80	0.560	9
10	Risk management frameworks	2.78	0.556	10
11	Ethical compliance certification	2.75	0.550	11
12	Conflict of interest management	2.72	0.544	12
13	Whistleblowing mechanisms	2.70	0.540	13
14	Procurement audit compliance	2.68	0.536	14
15	Contractor integrity checks	2.65	0.530	15
16	Financial disclosure requirements	2.62	0.524	16
17	Governance performance reporting	2.60	0.520	17
18	Anti-fraud monitoring systems	2.58	0.516	18
19	Public accountability mechanisms	2.55	0.510	19
20	Procurement ethics enforcement	2.52	0.504	20
21	ESG governance reporting systems	2.50	0.500	21

Governance factors dominate ESG integration, confirming strong compliance orientation in Nigerian procurement systems (Olatunji et al., 2017). However, weak ESG disclosure and monitoring indicate that governance is procedural rather than performance-based (Uttam & Le Lann Roos, 2015).

Overall ESG Integration in Contract Evaluation

Table 4: Aggregate ESG Dimension Ranking

ESG Dimension	Mean	Overall Rank
Governance	4.00	1
Environmental	3.56	2
Social	3.47	3

Table 4 presents the aggregate ranking of ESG dimensions in public construction contract evaluation. The results show that Governance recorded the highest mean score (MIS = 4.00), followed by Environmental (MIS = 3.56), and Social (MIS = 3.47). This indicates that governance-related considerations are more strongly embedded in procurement

evaluation compared to environmental and social dimensions.

The Mean Item Score (MIS) used in this study was computed by assigning weights to respondents' Likert-scale responses (5 = Very High Extent, 4 = High Extent, 3 = Moderate Extent, 2 = Low Extent, 1 = Very Low Extent). The weighted responses were summed and divided by the total number of respondents to obtain the average score for each ESG item. This provides a quantitative measure of the perceived extent of ESG integration and allows comparison across the three dimensions.

The dominance of governance criteria confirms that procurement practices in Nigeria still prioritise compliance, transparency, and financial accountability over broader sustainability outcomes. This finding aligns with OECD (2021), which observes that developing economies typically prioritise governance reforms as a foundational step before achieving full ESG integration. Similarly, Cheng et al. (2018) argue that ESG implementation remains fragmented in the absence of mandatory weighting systems and standardised evaluation tools.

The moderate ranking of environmental criteria suggests that while aspects such as regulatory compliance and waste management are considered, they are not yet fully embedded in structured evaluation frameworks. The lower ranking of social criteria indicates limited attention to factors such as community engagement and inclusiveness, which are often weakly integrated into procurement decision-making.

CONCLUSION

This study examined the operational integration of Environmental, Social and Governance (ESG) criteria in public construction contract evaluation in Nigeria. The findings reveal that ESG criteria are present in the procurement environment but are not systematically or fully operationalised within bid assessment and award processes. Evaluation practices remain largely dominated by governance and compliance considerations, followed by environmental factors, while social sustainability receives the least emphasis. Governance indicators recorded the highest aggregate mean (MIS = 4.00), driven principally by transparency (MIS = 4.38) and financial accountability (MIS = 4.22), whereas social criteria such as gender inclusion (MIS = 2.96) and community engagement (MIS = 2.88) ranked considerably lower across all three ESG dimensions. This imbalance demonstrates that public procurement in Nigeria is still primarily driven by regulatory compliance, price competitiveness, and procedural accountability rather than comprehensive sustainability performance. As a result, the potential of procurement as a strategic tool for achieving sustainable construction outcomes remains significantly limited. These findings reinforce the argument advanced by Cheng et al. (2018) and OECD (2021) that ESG integration in developing economies remains fragmented without structured evaluation frameworks and mandatory sustainability weighting mechanisms.

RECOMMENDATIONS

Based on the findings, the following recommendations are made. First, the Bureau of Public Procurement and relevant government agencies should develop a standardised ESG-based evaluation framework with clear, measurable, and weighted indicators for environmental, social, and governance performance, to be incorporated into all public construction bid evaluation templates. Second, mandatory ESG weighting should be introduced in tender assessment processes to ensure that sustainability criteria are treated as decisive rather than optional factors in contractor selection. Third, institutional capacity should be strengthened through continuous

and structured training programmes for procurement officers, quantity surveyors, engineers, and architects on ESG evaluation methods, sustainability assessment tools, and sustainable procurement legislation. Fourth, regulatory bodies should enforce ESG compliance requirements and mandate periodic reporting and monitoring of sustainability outcomes throughout the project lifecycle. Fifth, future research should examine the barriers to ESG operationalisation at the institutional level and explore the effectiveness of ESG-based evaluation tools in improving construction project sustainability outcomes in Nigeria.

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