ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jan058

Beyond Compliance: A Policy-Driven Digital Governance Framework for Embedding Procurement Sustainability in Nigeria's Bureau of Public Procurement

Adedokun Adebowale[1]

[1](Ph.D), (Bureau of Public Procurement)

Publication Date: 2026/01/06

Abstract: Although 15–20% of Nigeria's GDP comes from public procurement (World Bank, 2022; OECD, 2021), systemic leakages, elite capture, and gender exclusion still exist 17 years after the Public Procurement Act of 2007 (The A & E Law Partnership, 2024; Oyewobi et al., 2017). Using a sequential-explanatory mixed-methods design, this study evaluates the causal effects of BPP's digital reforms (2012–2023) on procurement efficiency (Creswell, 2014; Tashakkori & Teddlie, 2010). Additionally, it suggests a Policy-Driven Digital Governance Framework (PDGF) that incorporates AI-enabled anomaly detection, a sovereign Open Contracting Data Standard (OCDS) cloud hosted by the National Data Exchange (NDX), and gender-responsive green procurement (GRGP) regulations (Lawal Rasheed Ajibola et al., 2025; OBAZELE & OSUJI, 2025).

Only after the 2021 Executive Order on OCDS required granular transparency did e-bidding implementation reduce average cycle time by 22% ($p<0.01$) and bid-rigging red flags by 18% ($p<0.05$), according to difference-in-differences estimates on 4,000 federal contracts (OBAZELE & OSUJI, 2025; Krasnolutska, 2020). Qualitative elite interviews (n=37) show that sustainability clauses are still optional rather than required because the PPA 2007 does not include provisions for environmental, social, and governance (ESG) indicators (The A & E Law Partnership, 2024; Federal Ministry of Environment, 2023) (Onyango, 2019; Feiock, 2013).

In order to close this gap, the paper drafts a Procurement Sustainability Bill 2025 that modifies Sections 16, 30, and 58 of the PPA to include requirements for the circular economy, a 30% set-aside for women-owned SMEs, mandatory life-cycle costing, and a Sovereign Green Procurement Index (SGPI) (Bolton, 2021; UN Women, 2023). According to simulation modeling, SGPI could save NGN 1.8 trillion (€USD 2.4 billion) a year by 2030 and create 330,000 green jobs (Oyewobi et al., 2017; Geels, 2020). According to the report (Lawal Rasheed Ajibola et al., 2025; The A & E Law Partnership, 2024), BPP has the potential to lead the continent in inclusive, sustainable, and sovereign procurement governance.

Keywords: *Public Procurement, Sustainability, Digital Governance, Open Contracting, Nigeria, Policy, Gender-Responsive Procurement, AI-Enabled Anomaly Detection.*

How to Cite: Adedokun Adebowale (2026) Beyond Compliance: A Policy-Driven Digital Governance Framework for Embedding Procurement Sustainability in Nigeria's Bureau of Public Procurement. *International Journal of Innovative Science and Research Technology*, 11(01), 8-12. https://doi.org/10.38124/ijisrt/26jan058

I. INTRODUCTION

With an average of 12–20% of GDP in both OECD and African economies, public procurement is the biggest interaction between the government and the market (OECD, 2021; World Bank, 2022). Okonjo-Iweala (2018, p. 114) praised Nigeria's Public Procurement Act (PPA) of 2007 as "the most far-reaching economic governance reform since the 2003 Fiscal Responsibility Act." However, according to World Bank empirical audits from 2022, inflated contracts, emergency procurements, and bid-rigging result in yearly leakages of USD 4.2 billion (World Bank, 2022; The A & E Law Partnership, 2024).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jan058

Nigeria has committed to lowering greenhouse gas emissions by 20% unconditionally and 47% conditionally by 2030 as part of its Nationally Determined Contributions (NDCs) under the Paris Agreement (Federal Ministry of Environment, 2023). The 15% of GDP allotted to public contracts must be greened in order to meet these goals (Oyewobi et al., 2017; Lawal Rasheed Ajibola et al., 2025).

Digital technologies, such as e-Bidding, e-Evaluation, e-Contract registries, and the Nigerian Open Contracting Portal (NOCOPO), have been tested by the Bureau of Public Procurement (BPP) since 2012 (Bureau of Public Procurement, n.d.; OBAZELE & OSUJI, 2025). However, sustainability elements like gender involvement, circular economy requirements, and life-cycle costing are still optional rather than required (The A & E Law Partnership, 2024; UN Women, 2023). Environmental externalities are not included in the "value for money" requirement of Section 16 of the PPA (The A & E Law Partnership, 2024).

Although Section 30 gives the Council on Public Procurement the power to establish criteria, sustainability metrics are not legally binding (The A & E Law Partnership, 2024; Alomar & Visscher, 2017). Although corruption is illegal under Section 58, there are no requirements for ESG disclosure (The A & E Law Partnership, 2024). As a result, rather from being a legally enforceable fiduciary duty, procurement sustainability is seen as an optional extra (Oyewobi et al., 2017; Onyango, 2019).

Therefore, the main research question of this essay is: How can Nigeria's BPP change from a compliance-driven regulator to a sustainability-orchestrator without going against budgetary discipline or data sovereignty? Three unique contributions to procurement practice and scholarship are made by this study:

- Using rigorous quasi-experimental approaches, it offers the first longterm effect study of BPP's digital reforms (2012–2023) on efficiency and integrity outcomes (Creswell, 2014; OBAZELE & OSUJI, 2025).
- It designs a Policy-Driven Digital Governance Framework (PDGF) that integrates AI-enabled anomaly detection, gender-responsive green procurement (GRGP), and sovereign cloud infrastructure (Lawal Rasheed Ajibola et al., 2025; Das, 2024).
- It drafts a Procurement Sustainability Bill 2025 that amends the PPA 2007 to codify mandatory ESG metrics, establish a Sovereign Green Procurement Index (SGPI), and ring-fence 30% of federal contracts for women-youth-owned SMEs (Bolton, 2021; UN Women, 2023).

II. LITERATURE REVIEW

➢ *Digital Procurement Governance*

In public procurement, digitalization can lower transaction costs by 30–75% (OECD, 2021; Alomar & Visscher, 2017). In just two years, the ProZorro platform in Ukraine increased competitiveness by 57% while saving USD 1.4 billion (Krasnolutska, 2020). However, political will is necessary for digital gains; Kenya's IFMIS implementation failed to eliminate corruption because of institutional autonomy (Onyango, 2019; Feiock, 2013). Due to lax enforcement, e-tendering and e-award have no discernible influence on transparency in Nigeria, while e-registration and e-evaluation components have shown notable benefits (OBAZELE & OSUJI, 2025; Lawal Rasheed Ajibola et al., 2025). This implies that organizational capability, multi-stakeholder cooperation, and reliable sanctions are critical to the success of digital procurement (Alomar & Visscher, 2017; Das, 2024).

➢ *Procurement Sustainability*

The European Union's Green Public Procurement (GPP) standards reduce CO2 emissions by 55 million tonnes annually (European Commission, 2022; The A & E Law Partnership, 2024). The Preferential Procurement Policy Framework Act (PPPFA) of South Africa reserves 30% of tenders for SMMEs and requires 80% local content in certain industries (Bolton, 2021). Chile's gender-responsive procurement (GRP) increased women-led SME share from 11% to 34% between 2015 and 2022 (UN Women, 2023; Das, 2024)

Similar legal frameworks are absent in Nigeria, where sustainability provisions are still optional and unenforced (Oyewobi et al., 2017; The A & E Law Partnership, 2024). Construction sector procurement faces particular challenges due to regulatory gaps and limited government commitment (Oyewobi et al., 2017; Embedding Sustainability in the Public Procurement Framework of Developing Countries- An Empirical Analysis of the Lagos State Government, 2015).

➢ *Theoretical Lens*

The theories of Socio-Technical Systems (STS) (Geels, 2020) and Institutional Collective Action (ICA) (Feiock, 2013) are combined in this essay. The collapse of multi-level procurement governance in the absence of reliable sanctions and enforcement mechanisms is explained by ICA (Feiock, 2013; Onyango, 2019). STS emphasizes that technology cannot drive sustainable transformations on its own by framing digital procurement as a co-evolution of technological objects, institutional regulations, and actor networks (Geels, 2020; Das, 2024).

When combined, these theories offer a strong analytical framework for comprehending the relationship between policy, technology, and institutions in procurement governance (Lawal Rasheed Ajibola et al., 2025; OBAZELE & OSUJI, 2025).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jan058

III. METHODOLOGY

➢ *Research Design*

This research uses a sequential-explanatory mixed-methods design (Creswell, 2014; Tashakkori & Teddlie, 2010). Phase 1 establishes causal effects through quasi-experimental impact evaluation (OBAZELE & OSUJI, 2025). Phase 2 examines implementation mechanisms through qualitative elite interviews (Onyango, 2019). Phase 3 involves developing policies with stakeholder validation and legal coherence assessments (Bolton, 2021; The A & E Law Partnership, 2024). Internal validity and practical policy relevance are guaranteed by this triangulated approach (Creswell, 2014; Lawal Rasheed Ajibola et al., 2025).

➢ *Data*

The quantitative data consists of 4,000 federal contracts totaling more than NGN 100 million (2012-2023) that were obtained from NOCOPO, the Government Integrated Financial Management Information System (GIFMIS), and the BPP Monitoring & Evaluation dashboard (Bureau of Public Procurement, n.d.; OBAZELE & OSUJI, 2025). Purposive-maximum variation sampling of 37 semi-structured elite interviews with procurement officers, contractors, civil society organizations, and legal experts yielded qualitative data (Creswell, 2014; Onyango, 2019). Robust examination of processes and results is made possible by this extensive dataset (Lawal Rasheed Ajibola et al., 2025; Das, 2024).

➢ *Identification Strategy*

The study exploits phased implementation of e-Bidding across 16 ministries between 2016 and 2021 using a Difference-in-Differences (DiD) design (OBAZELE & OSUJI, 2025; Krasnolutska, 2020). Treatment group consists of ministries where e-bidding became mandatory, while control group comprises entities continuing manual procedures until 2021 (Onyango, 2019)

Cycle time (days from bid opening to contract signature) and the red-flag index (composite measure of single-bidding incidence, cost overruns above 5%, and emergency procurement invocation) are examples of outcome variables (The A & E Law Partnership, 2024; OBAZELE & OSUJI, 2025). The impacts of digital reform can be causally identified thanks to this design (Creswell, 2014; Feiock, 2013).

IV. OUTCOMES

A. *Characteristic Statistics*

According to the sample, the average contract value is USD 11.4 million, with infrastructure accounting for 68%, ICT for 14%, and health and other sectors for 18% (World Bank, 2022; OBAZELE & OSUJI, 2025). The average cycle time was 267 days prior to 2021; it dropped to 208 days after the OCDS Executive Order 2021 (The A & E Law Partnership, 2024; Bureau of Public Procurement, n.d.). According to these trends, digital transparency initiatives increase productivity right away (Das, 2024; Krasnolutska, 2020).

B. *DiDEstimates*

Table 1 (Appendix) demonstrates statistically significant treatment effects, showing a 22.3% reduction in cycle time ($p<0.01$) and 18.1% decrease in red-flag likelihood ($p<0.05$) for treated entities (OBAZELE & OSUJI, 2025). Heterogeneity analysis reveals effect sizes double in ministries possessing autonomous IT units and gender-balanced evaluation committees (UN Women, 2023; Das, 2024).These results are consistent with research that highlights inclusive governance and organizational capability as essential success determinants (Lawal Rasheed Ajibola et al., 2025; Alomar & Visscher, 2017). Cycle-time reduction ($p<0.01$) has a larger statistical significance than red-flag decrease ($p<0.05$), suggesting that digital reforms more consistently increase efficiency than integrity results (OBAZELE & OSUJI, 2025; Onyango, 2019).

Table 1 The Difference -in-Difference (DiD) Estimates Table

Outcome Measure	Effect Size	Significance	Sample	Heterogeneity Modifier
Cycle-time reduction	-22.3%	$p < 0.01$	Treated entities	Effect size doubles in ministries with: • Autonomous IT units • Gender-balanced evaluation committees
Red-flag likelihood	-18.1%	$p < 0.05$	Treated entities	Effect size doubles in ministries with:• Autonomous IT units• Gender-balanced evaluation committees

➢ *Key Findings Interpretation:*

- Cycle-time and red-flag likelihood both decreased significantly for treated groups
- Cycle-time reduction is significant at the 1% level (stronger evidence)
- Red-flag reduction is significant at the 5% level
- Effects are not uniform—they are twice as large in ministries with specific organizational characteristics (IT autonomy and gender-balanced committees)

➢ *Qualitative Perspectives*

Persistent implementation deficiencies are shown by elite interviews: "Sustainability clauses are seen as 'nice-to-have'; no MDAs lose budget if they ignore them" (Senior BPP Director, Interview #12; Feiock, 2013). Concerns about data sovereignty are evident: "We still host data on AWS Ireland; sovereignty is a myth" (GMD-IT, NOCOPO, Interview #9; Das, 2024).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jan058

"30% set-aside for women is politically attractive but legally hollow" (BPP Legal Counsel, Interview #23; UN Women, 2023; Bolton, 2021). These testimonies highlight the need for required legal frameworks that go beyond voluntary compliance (Oyewobi et al., 2017; The A & E Law Partnership, 2024).

C. Infrastructure for Sovereign Clouds

In accordance with NITDA's Government Cloud Policy 2022, NOCOPO should be moved to National Data Exchange (NDX), a tier-III green data center in Abuja powered by 25 MW solar PV (Lawal Rasheed Ajibola et al., 2025; Das, 2024). This lowers carbon emissions and guarantees data sovereignty (The A & E Law Partnership, 2024).

D. Integrity Layer Enabled by AI

To identify collusive bids and pricing spikes, implement Nigeria Procurement Anomaly Engine (NPAE), a federated-learning model trained on 10-year contract metadata (OBAZELE & OSUJI, 2025; Krasnolutska, 2020). Testing reveals 89% recall and 94% precision (OBAZELE & OSUJI, 2025; Alomar & Visscher, 2017).

E. Gender-Responsive Green Procurement (GRGP) Rules

The Federal Carbon-Credit Scheme 2024 will require life-cycle costing (LCC) and internalize the USD 40/tCO2e carbon price (Federal Ministry of Environment, 2023; European Commission, 2022).

- 30% reserved for female-owned SMEs with a 5% price preference and a 50% advance payment guarantee through the Development Bank of Nigeria (DBN) (Bolton, 2021; UN Women, 2023)
- 12 priority product categories, including electronics, textiles, plastics, steel, and cement, are subject to circular economy requirements (recycled content, modularity, and extended producer responsibility) (Oyewobi et al., 2017; The A & E Law Partnership, 2024).

F. The SGPI, or Sovereign Green Procurement Index

30% GHG reductions, 25% SME engagement, 20% gender inclusion, 15% local content, and 10% cost savings make up the composite score (0–100) weighting (Lawal Rasheed Ajibola et al., 2025; UN Women, 2023). SGPI will be linked to ministerial performance contracts and released on a quarterly basis as an Executive Scorecard (Fiscal Responsibility Commission, n.d.; The A & E Law Partnership, 2024).

V. RE-ENGINEERING THE LAW AND INSTITUTIONS

The 2025 draft of the Procurement Sustainability Bill that Section 16 is amended to describe "value for money" as the lowest life-cycle cost that takes into account ESG externalities (The A & E Law Partnership, 2024; Alomar & Visscher, 2017). The National Council on Sustainable Procurement (NCSP), headed by the Vice President and with an independent budget, is established by the new Section 30B (Feiock, 2013; Bolton, 2021).

- Modifies Section 58 to make fraudulent ESG disclosure, or "greenwashing," a crime punishable by five years in prison and a fine equal to 500% of the contract value (The A & E Law Partnership, 2024; Onyango, 2019).
- Establishes the Procurement Sustainability Fund (PSF), a 2% charge on contracts above NGN 1 billion, to fund the development of women's young SME capability and the incubation of green technology (UN Women, 2023; Lawal Rasheed Ajibola et al., 2025).

VI. MECHANISMS FOR POLICY SUSTAINABILITY

Durability is ensured by six lock-in mechanisms based on ICA theory:

- Fiscal Rule: MDAs must have an SGPI score of at least 60 in order to use CBN's Ways & Means facility (Fiscal Responsibility Commission, n.d.; Feiock, 2013).
- Legislative Entrenchment: The bill's sunset clause is reviewed every five years, but it requires two-thirds of the National Assembly and twenty-four state assembly to change it, which increases the political transaction costs of reversal (Bolton, 2021; The A & E Law Partnership, 2024).
- Multiple stakeholders Oversight: CSOs, young people, women, people with disabilities, and representatives from the private sector are among the NCSP seats that have the power to reject modifications to guidelines (Lawal Rasheed Ajibola et al., 2025; UN Women, 2023).
- Data Sovereignty: All primary data is stored on NDX; offshore backup is only possible through bilateral diplomatic agreements that adhere to the Nigeria Data Protection Regulation 2023 (Das, 2024; NITDA, 2022).
- Capacity Sustainability: The Chartered Institute of Procurement & Supply (CIPS) co-certifies the curriculum of BPP Academy, which is funded by PSF to train 5,000 procurement professionals yearly (OBAZELE & OSUJI, 2025; Alomar & Visscher, 2017).
- Gender & Green Dividend: Modeling shows 330,000 new jobs (60% women) and 18 Mt CO_2e avoidance by 2030—creating constituencies for continuity across political cycles (Oyewobi et al., 2017; Federal Ministry of Environment, 2023)

VII. CONCLUSION & RECOMMENDATIONS

Sustainability results are still dependent on necessary legislative frameworks, despite this study's causal proof that BPP's digital changes increased integrity and efficiency (OBAZELE & OSUJI, 2025; Lawal Rasheed Ajibola et al., 2025). Through fiscal regulations, data sovereignty, and legal codification, the PDGF provides a green, gender-responsive, and sovereign road that guarantees procurement sustainability

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jan058

(Das, 2024; UN Women, 2023). The report calls for quick legislative action while praising the Federal Government's progressive position.

➢ *Specific Recommendations*

- Executive: Use the joint budget session to hasten the approval of the Procurement Sustainability Bill 2025 through the Presidential Executive Bill route (Bolton, 2021; The A & E Law Partnership, 2024).
- National Assembly: Use the OCDS evidence base provided by BPP to conduct pre-legislative examination (Creswell, 2014; OBAZELE & OSUJI, 2025).
- Ministries: Under the next FGN budget cycle, immediately test GRGP regulations in the fields of construction, health, power, and the environment (Lawal Rasheed Ajibola et al., 2025; Oyewobi et al., 2017).
- Development Partners: Comply with SGPI requirements for World Bank PIDA, AfDB SGP, and EU-Nigeria Green Deal funding (World Bank, 2022; European Commission, 2022).
- CSOs/Media: Create an annual Citizens Procurement Sustainability Report and monitor SGPI performance using the NOCOPO-OCDS API (Das, 2024; NEITI, n.d.).

REFERENCES

[1]. Alomar, M., & Visscher, K. (2017). Procurement compliance frameworks. Public Administration Review.

[2]. Bolton, P. (2021). South Africa's Preferential Procurement Policy Framework Act: Lessons for African public procurement reform. Journal of African Law, 65(2), 234-256.

[3]. Bureau of Public Procurement. (n.d.). Nigerian Open Contracting Platform (NOCOPO). Retrieved from https://nocopo.bpp.gov.ng

[4]. Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). Sage Publications.

[5]. Das, D. K. (2024). Exploring the symbiotic relationship between digital transformation, infrastructure, service delivery, and governance for smart sustainable cities. Smart Cities, 7(2), 806-835.

[6]. Embedding Sustainability in the Public Procurement Framework of Developing Countries- An Empirical Analysis of the Lagos State Government. (2015). Journal of Economics and Sustainable Development, 6(18).

[7]. European Commission. (2022). Green Public Procurement: A collection of good practices. Publications Office of the European Union.

[8]. Federal Ministry of Environment. (2023). Nigeria's Nationally Determined Contributions (NDCs) Progress Report. Abuja: Federal Government Press.

[9]. Feiock, R. C. (2013). The institutional collective action framework. Policy Studies Journal, 41(3), 397-425.

[10]. Geels, F. W. (2020). Socio-technical transitions to sustainability: A review of criticisms and elaborations of the Multi-Level Perspective. Current Opinion in Environmental Sustainability, 45, 1-7.

[11]. Krasnolutska, D. (2020). How Ukraine's ProZorro saved $1.4 billion and transformed public procurement. Harvard Kennedy School Review, 20, 45-52.

[12]. Lawal Rasheed Ajibola, Sule Magaji, & Ibrahim Musa. (2025). Digital Technologies and Sustainable Procurement in Nigeria: Enhancing transparency and efficiency through multi-stakeholder collaboration. ISA Journal of Business, Economics and Management.

[13]. NITDA. (2022). Nigeria Government Cloud Policy. Abuja: National Information Technology Development Agency.

[14]. OBAZELE, E. O., & OSUJI, S. (2025). The Role of E-Government Procurement Systems in Promoting Sustainable Procurement: Evidence From Edo State. Nigeria Journal of Business Administration, 23(1), 1-16.

[15]. OECD. (2021). Recommendation of the Council on Public Procurement. Paris: OECD Publishing.

[16]. Okonjo-Iweala, N. (2018). Fighting corruption is dangerous: The story behind the headlines*. MIT Press.

[17]. Onyango, D. (2019). Why IFMIS failed to curb corruption in Kenya: Institutional autonomy and political economy perspectives. *African Journal of Public Administration*, 3(2), 78-95.

[18]. Oyewobi, L. O., Mohammed, I. I., & Jimoh, R. A. (2017). Achieving Sustainable Procurement Practices in the Nigerian Construction Industry: Examining Potential Barriers and Strategies. ATBU Journal of Environmental Technology, 10, 63-84.

[19]. Tashakkori, A., & Teddlie, C. (2010). Sage handbook of mixed methods in social & behavioral research. Sage Publications.

[20]. The A & E Law Partnership. (2024). Sustainability Practice in Public Procurement in Nigeria. Retrieved from https://aandelawblog.wordpress.com

[21]. UN Women. (2023). Gender-responsive procurement: Global review and country cases. New York: UN Women Publications.

[22]. World Bank. (2022). Nigeria Public Expenditure Review: Procurement Efficiency and Integrity. Washington, DC: World Bank Group.