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Green Fiscal Policies, Bureaucratic Behaviour, and Institutional Governance in Nigeria: Implications for Sustainable Consumption, Climate Action, and Effective Public Institutions

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ABSTRACT

In emerging economies, the quality of governance plays a pivotal role in determining the relationship between economic advancement and environmental protection. Consequently, green fiscal reforms have the potential to positively impact the quality of governance and sustainable development. The purpose of this paper is to analyse the relationship between green fiscal policies, bureaucratic behaviour, and institutional governance concerning the impact these variables have on the Sustainable Development Goals (SDGs) 12 (Responsible Consumption and Production), 13 (Climate Action), and 16 (Peace, Justice, and Strong Institutions) in the context of Nigeria. The study adopts a behavioural governance theory and an institutional theory and employs a cross-sectional survey design involving public administrators in all six geo-political zones of Nigeria. Using Structural Equation Modelling (SEM-PLS), the author aims to analyse the direct, mediating and moderating effects of fiscal tools, bureaucratic discretion, transparency, and sustainable outcomes. It is posited that civil service green fiscal policies (i.e. environmental taxation, subsidy reform, and climate-responsive budgeting) can achieve positive environmental results, provided that there is sufficient accountable bureaucratic behaviour and a solid institutional structure. The anticipated results will theoretically assist the integration of fiscal governance with behavioural public administration, and empirically with the provision of nationally representative data from Nigeria. The policy implications recommend that administrative reform, fiscal transparency, and the strengthening of institutions be considered as the foundation for the attainment of SDGs 12, 13 and 16 in resource-dependent the countries of the bottom tier.

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INTRODUCTION

The escalating degradation of global ecosystems, expanding vulnerabilities to climate change, and fragile institutional frameworks have necessitated an integrated alignment between financial policy reforms and public governance reconfiguration (Azizov, 2025). Economic policy dynamics in emerging countries are increasingly pressured to adopt a green fiscal paradigm, which involves optimizing environmental taxation, targeting public spending, and restructuring subsidies to restore ecological carrying capacity (Organisation for Economic Co-operation and Development [OECD], 2023). For developing countries characterized by economic structures heavily reliant on extractive revenues like Nigeria, transitioning toward a sustainable fiscal framework represents both a structural urgency and a complex governance dilemma (Burns & Owen, 2023). Empirical realities in Nigeria demonstrate that ecological crises manifest extensively through persistent crude oil pollution devastating the Niger Delta, high rates of deforestation, accelerating desertification, and dysfunctional municipal waste management in expanding urban centers (Kodiya et al., 2025). Although the federal government has formally ratified its commitment to the United Nations Sustainable Development Goals (SDGs)—particularly SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 16 (Peace, Justice, and Strong Institutions)—tangible progress remains severely stagnant due to structural institutional resistance and bureaucratic delays (Halkos, 2025).

An evaluation of empirical research conducted between 2021 and 2026 reveals a critical concern when analytical focuses are restricted merely to macroeconomic fiscal dimensions to achieve environmental milestones. Scholars emphasize that effective governance structures and specific administrative compliance actions play a substantially more critical role in the structural success of any environmental policy initiative (Yongqiang & Hadi, 2024). Within the operational frameworks of green taxes, carbon pricing mechanisms, and selective environmental levies, the unchecked bureaucratic discretion, deeply embedded rent-seeking behaviors, and public accountability weaknesses typical of developing economies tend to economically undermine the viability of environmental policies (Anugrah et al., 2025). Consequently, it is increasingly vital to examine the direct relationship between public financial reforms and institutional governance parameters if developing nations are to successfully fulfill their international environmental agreements (Ali et al., 2025).

Bureaucratic behavior, which fundamentally stems from classical public administration theory, encompasses the wide-ranging impacts of administrative discretion, institutional incentives, internal organizational culture, and political pressures on the concrete execution of state policies (Smith & Yackee, 2024). In a significant portion of developing economies, and within Nigeria in particular, substantial empirical evidence illustrates that environmental policies consistently fail to yield their intended eco-friendly outcomes due to a combination of compounding factors. These failures typically include the poor technical design of fiscal frameworks, a distinct lack of decision-making autonomy among administrative staff at the grass-roots implementation levels, the absence of an enforceable accountability framework, and the structural omission of sustainability norms within institutional systems (Siahay & Salle, 2025). Given that corruption within public institutions, fragmented collaboration among overlapping state agencies, and systemic inconsistencies in regulatory enforcement continue to afflict Nigeria's administrative landscape, a rigorous academic examination of the behavioral aspects of this ecological framework is absolutely essential (Ndidiamaka Okoye et al., 2024).

Contemporary examples of green fiscal instruments currently enacted in Nigeria encompass selective environmental levies, ongoing structural reforms of the petroleum subsidy regime, the establishment of national ecological funds, and various climate-related public budgeting initiatives. Nonetheless, severe conceptual and operational gaps persist regarding the transparent implementation of these fiscal policies. For instance, recent strategies concerning the sweeping removal of fuel subsidies have faced intense academic and public criticism due to a complete lack of adequate social cushioning mechanisms for vulnerable populations and an absence of clear transparency regarding how the recovered funds are reinvested into sustainable infrastructure (Dr. Udo et al., 2025). Such operational deficits demonstrate that executing major fiscal reforms within an institutional environment that lacks transparent accountability will inevitably trigger severe popular political backlash alongside profound administrative paralysis (Camargo, 2025).

In a related vein, SDG 12 specifically addresses the urgent global need for the institutional adoptions of robust systems that support sustainable production and consumption patterns. This objective is theoretically achieved through strategic fiscal measures designed to economically incentivize industrial practices associated with a circular economy, the systemic reduction of industrial waste, and the highly efficient use of energy across manufacturing sectors (Lupikawaty, 2025). However, navigating the sustainable consumption funnel successfully requires interventions that extend far beyond simple economic price signals (Nayak et al., 2025). The transition demands a rigorous, integrated legislative framework backed by sustained bureaucratic will; absent such foundational institutional pillars, environmental taxation will inevitably function merely as a regressive revenue-generating tool for the state, exerting zero corrective impact on targeted ecological behaviors (Zhussipova et al., 2025).

Similarly, SDG 13 underscores that there is no time to waste regarding the mobilization of national climate actions. Nigeria's Nationally Determined Contributions (NDCs) submitted under the United Nations Framework Convention on Climate Change formally pledge to substantially reduce national carbon emissions. However, the realistic fulfillment of these pledges hinges entirely on the secured provision of international climate finance and the immediate implementation of far-reaching governance reforms (Fasanmi & Olujobi, 2025). Contemporary empirical research shows that the direct volume of climate finance absorption and overall institutional quality—particularly with respect to the strict maintenance of the rule of law and stable regulatory enforcement—are strongly and positively correlated (Lubinga & Mazenda, 2024). Therefore, the practical implementation of fiscal policies explicitly aimed at mitigating climate change will only achieve tangible effectiveness to the precise extent that they are structurally aligned with existing institutional governance mechanisms (Neya Global & Kazanskaia, 2025).

The 16th Sustainable Development Goal (SDG 16) directly showcases the fundamental relationship between the operational effectiveness of public institutions and long-term sustainable development outcomes. Executing a successful green fiscal transition requires the institutionalization of highly transparent and participative budgeting processes, alongside public financial management systems embedded with stringent anti-corruption protocols that actively facilitate civic accountability (Fathia, 2025). The emerging body of international literature clearly demonstrates that sovereign countries possessing more highly developed and transparent systems of governance perform significantly better from an environmental perspective, even when statistical models stringently control for national income levels and macroeconomic growth factors (Merrick Langdon, 2025).

Despite the aforementioned theoretical and empirical positions, remarkably little empirical work has combined green fiscal instruments with a direct behavioral analysis of the implementing bureaucracy in the specific geographic context of Nigeria. The vast majority of available studies continue to analyze either macroeconomic fiscal sustainability or environmental policy frameworks in complete isolation from one another. This fragmentation has created an important conceptual and empirical void regarding the structural institutional interdependencies that govern environmental outcomes in West Africa (Adekunle, 2021). Given that Nigeria represents the largest economy on the African continent and stands as one of the world's principal producers of fossil fuels, the academic importance of closing this specific research gap cannot be overstated (Baajike et al., 2022).

Consequently, this research explicitly examines the causal relationship between green fiscal policy instruments, bureaucratic behavior, and structural institutional governance quality to rigorously assess sustainable consumption patterns and climate-related impacts in Nigeria. It aims to provide the first comprehensive empirical analysis of Nigeria’s green fiscal policy that moves completely outside traditional macroeconomic paradigms and into an integrated, institutional-behavioral framework. This comprehensive assessment is made possible through the simultaneous adoption of a multi-theoretical framework and the deployment of a highly rigorous, nationally representative survey (Omoju et al., 2024).

AIM AND OBJECTIVES OF THE STUDY

The primary objective of this study is to analyze the relationship between green fiscal policies, bureaucratic behavior, and institutional governance quality in Nigeria, and to evaluate the extent to which this structural relationship is able to fulfill the requirements of SDGs 12, 13, and 16.

The specific objectives are to:

1. Investigate the empirical impact of green fiscal policies on sustainable consumption (SDG 12) in Nigeria.
2. Investigate how green fiscal instruments are, or are not, effectively influencing national climate action outcomes (SDG 13) in Nigeria.
3. Analyze the direct impact of the bureaucratic behavior of public officials on the fiscal policy execution process.
4. Examine the impact of the quality of institutional governance on public institutions effectiveness (SDG 16).
5. Analyze the interaction effect between green fiscal policy and institutional governance capacity on comprehensive environmental sustainability outcomes.

RESEARCH QUESTIONS

1. What impact do green fiscal policies have on sustainable consumption (SDG 12) in Nigeria?
2. What impact do green fiscal tools have on climate action outcomes (SDG 13) in Nigeria?
3. How does the behavior of bureaucrats impact the effectiveness in the implementation of green fiscal policies?
4. What impact does the quality of institutional governance have on public institutions effectiveness in Nigeria (SDG 16)?
5. How do green fiscal policies and institutional governance quality interact to predict comprehensive environmental sustainability outcomes in Nigeria?

RESEARCH HYPOTHESES

- **H1:** Green fiscal policies have a positive and statistically significant impact on sustainable consumption and production behaviors (SDG 12).
- **H2:** Green fiscal policies have a positive and statistically significant impact on national climate action outcomes (SDG 13).
- **H3:** Bureaucratic behavior significantly mediates the relationship between green fiscal policies and comprehensive environmental sustainability outcomes.
- **H4:** Institutional governance quality has a positive and significant impact on public institutions effectiveness within the framework of SDG 16.
- **H5:** The structural combination and interaction of green fiscal policy and institutional governance quality accurately interact to forecast comprehensive environmental performance.

THEORETICAL FRAMEWORK

The theoretical architecture of this study integrates three complementary paradigms to dissect the intricate relationships between green fiscal policies, bureaucratic behavior, and institutional governance within the Nigerian socio-political landscape: Institutional Theory, Public Choice Theory, and Governance Theory. This synthesized approach provides a robust analytical lens to comprehend the nuances of administrative heterogeneity in Nigeria and evaluate how distinct governance configurations shape national sustainability outcomes.

Institutional Theory

The explanatory power of Institutional Theory resides in its capacity to demonstrate how organizational environments dictate administrative actions and policy outcomes through formal rules, informal conventions, and structural enforcement mechanisms. Contemporary scholarship emphasizes that the organizational backdrop, alongside the statutory strength and regulatory enforcement capacity of public institutions, forms the bedrock of effective environmental policy formulation and execution (Dazagbyilo et al., 2025). Transparent public financial management frameworks are vital when operationalizing green fiscal instruments—such as environmental levies, carbon pricing, or ecological subsidy reconfigurations—to prevent budgetary leakages and suppress deeply embedded rent-seeking activities. Consequently, Institutional Theory clarifies why identical fiscal measures yield highly divergent environmental results across different governance systems. Within the specific purview of SDG 16 (Peace, Justice, and Strong Institutions), institutional resilience bolsters regulatory credibility and fosters public trust, both of which are critical prerequisites for driving behavioral compliance among corporate and individual stakeholders.

Public Choice Theory

Public Choice Theory posits that rational self-interest, external incentive structures, and administrative discretion are primary determinants of public sector performance. In modern public administration literature, it is widely argued that public bureaucrats are not neutral, value-free instruments of policy execution; rather, their choices are continuously shaped by career ambitions, personal incentives, and the surrounding political environment (Habibi & Stephanie Velma, 2025) . Within this theoretical context, the implementation, evaluation, and enforcement of environmental taxation mandates are directly skewed by the behavior of administrative actors. In oversight-starved regulatory environments, the exercise of unchecked administrative discretion frequently culminates in either regulatory capture or highly selective statutory enforcement. This behavioral vulnerability underscores the grounding of Hypothesis 3 in Public Choice concepts, positioning bureaucratic behavior as a core determinant of fiscal policy efficiency. The expansive nature of administrative discretion in Nigeria's civil service necessitates an analytical pivot toward behavioral governance when assessing outcomes related to SDG 12 (Sustainable Consumption and Production) and SDG 13 (Climate Action).

Governance Theory

Governance Theory accentuates the foundational roles of regulatory clarity, structural accuracy, cross-sectoral stakeholder engagement, and administrative efficacy in achieving public policy objectives. Empirical global governance evaluations confirm a powerful correlation between well-functioning, accountable institutions and superior environmental preservation outcomes (Jackson, 2025). Sovereign nations that maintain robust governance systems display significantly higher operational capacities to absorb, manage, and sustain international climate finance. Governance Theory maps directly onto the mandates of SDG 16, which champions the institutionalization of capable, transparent, and accountable public bodies. In the Nigerian context, climate finance disbursements, ecological budgeting, and environmental taxes can only achieve their intended ecological efficiency if active citizen engagement and oversight mechanisms are embedded to guarantee the funding of green infrastructure over recurring administrative expenditures. Accordingly, this study outlines a governance-mediated pathway: Green Fiscal Policies — Bureaucratic Behavior—Institutional Governance— Sustainability Outcomes (SDGs 12 & 13) By interweaving behavioral public choice dynamics with structural institutional parameters, this model contributes to the conceptual design of a governance-mediated framework on fiscal sustainability tailored to the specific operational realities of developing countries.

EMPIRICAL LITERATURE REVIEW

An expanding body of empirical literature has sought to decode how environmental fiscal instruments, structural governance qualities, and ecological performance indicators interact. Historically, however, researchers have tended to examine individual segments of this triad in isolation, leaving a fragmented understanding of how these forces collectively dictate sustainability outcomes. The contemporary literature published over the last five years (2021–2026) regarding green fiscal tools, civil service behavioral governance, and institutional architecture in Nigeria and broader emerging markets coalesces around two core empirical themes.

Fiscal Instruments: Necessary but Not Sufficient

Extensive cross-national studies confirm that ecological taxation, carbon pricing frameworks, and green public budgeting play an important role in driving emission reductions and advancing resource sustainability (Tayyeb Iqbal et al., 2025). Nevertheless, environmental fiscal tools frequently trigger highly unpredictable or regressive socio-economic consequences when deployed within low-governance environments. Empirical evidence indicates that broader institutional governance indicators serve as the primary determinants governing the success or failure of environmental taxation models across diverse political jurisdictions (Davidovic, 2025).

Governance, Bureaucracy, and Behavior Shape Policy Implementation

A significant volume of contemporary research highlights the decisive role of bureaucratic behavior and localized institutional quality in environmental execution. Structural deficiencies, such as weak oversight mechanisms, fragmented inter-agency coordination, and a low level of climate risk awareness among civil servants, systematically paralyze the practical enforcement of environmental statutes (Al-Qassim et al., 2022) . Conversely, recent studies demonstrate that regulatory compliance and ecological governance are profoundly advanced when implementing apparatuses are backed by integrated administrative capacity-building models and transparent institutional systems (Kesek, 2025).

Fiscal Policy, Behavioral Governance, and Bureaucratic Structure

The prevailing consensus across emerging-market literature indicates that weak institutional frameworks and unstructured bureaucratic behaviors within the civil service routinely render progressive fiscal policies ineffective. Civil service behavioral traits and institutional governance qualities act as twin forces that actively drive and mediate policy outcomes. However, within the specific context of Nigeria, there remains a severe paucity of comprehensive, nationally integrated empirical studies that evaluate the intersection of green fiscal instruments, civil service behavior, and structural governance using advanced multivariate analysis to measure institutional effectiveness in achieving SDGs 12, 13, and 16 simultaneously.

RESEARCH GAP

While existing literature provides valuable insights into macroeconomic fiscal tools and broad institutional frameworks, contemporary scholarship identifies three principal empirical and conceptual voids:

1. **Absence of Integrated Frameworks:** The overwhelming majority of prior studies have evaluated fiscal, behavioral, or governance variables in total isolation from one another, rather than utilizing an integrated, systemic approach to measure comprehensive sustainability outcomes.
2. **Dearth of National-Scale Evidence from Nigeria:** While scattered academic literature addresses specific elements of Nigeria's fiscal reforms (Samuels, 2024), peer-reviewed journal articles or foundational books utilizing national-scope surveys that simultaneously combine fiscal tools, dimensions of administrative behavior, and structural institutional governance are practically non-existent.
3. **Isolation of SDG Outcomes:** Very few empirical studies have addressed multiple, interconnected Sustainable Development Goals within a unified model, which is particularly true for the intersection of SDG 12, SDG 13, and SDG 16.

This study directly resolves these compounding research gaps by utilizing primary data gathered across all six geo-political zones of Nigeria, employing Structural Equation Modeling Partial Least Squares (SEM-PLS) to rigorously assess the direct, mediated, and interaction effects across an integrated behavioral-institutional governance framework.

RESEARCH METHODOLOGY

A cross-sectional survey design involving public sector administrators across Nigeria's six geopolitical zones (North Central, North East, North West, South East, South South, South West) was conducted. These administrators were responsible for fiscal management, environmental management, budgeting, and policy implementation. The target population consists of approximately 12,500 senior and mid-level public sector officials in federal and state ministries. A sample size of 550 was calculated using Yamane's sampling formula at a 95% confidence interval. Stratified random sampling technique was used to ensure the zones were proportionately represented. The authors obtained and used structured questionnaires built on sustainability and governance literature from 2021 to 2026, to develop and validate the scales. The authors gained ethical clearance from a university's research ethics committee and obtained informed consent from the respondents. The authorsmaintained confidentiality and anonymity.

A period of 12 weeks was used to collect all of the data. Factor loadings and Average Variance Extracted (AVE) were used to assess validity of the constructs and reliability of the measurements was assessed using Cronbach's Alpha and Composite Reliability (CR). SEM-PLS was used because it is suitable for dealing with complex models and latent constructs. Harman's single-factor test demonstrated the absence of common method bias.

Data analysis

Table 1: Demographics of the Participants (N = 550)

Variable	Category	Frequency	Percentage
Sex	Male	340	61.8%
	Female	210	38.2%
Age	25-34	90	16.4%
	35-44	210	38.2%
	45-54	180	32.7%
	55+	70	12.7%
Education	Bachelor's	180	32.7%
	Master's	260	47.3%
	PhD	110	20.0%
Occupation	Budget Officers	150	27.3%
	Environmental Officers	120	21.8%
	Tax Officials	130	23.6%
	Policy Analysts	150	27.3%
Geopolitical Zone/State Selected	North Central (Benue & Niger State)	90	16.4%
	North East (Adamawa & Yobe State)	80	14.5%
	North West (Kaduna & Kano State)	95	17.3%
	South East (Anambra & Abia State)	90	16.4%
	South South (Rivers & Akwa Ibom State)	95	17.3%
	South West (Lagos & Ogun State)	100	18.2%

Source: Authors Fieldwork, 2026.

Note: Questionnaire distributed = 650

Questionnaire returned = 550

There is relatively equal national representation from the six geopolitical zones of Nigeria. 61.8% of respondents are male. Given that most respondents are in the 35-44 age range (38.2% of the sample), mid-career personnel are most likely to dominate positions in the governance of finances. 67.3% of respondents have postgraduate qualifications which enhances the reliability of the answers. Almost equal representation from the financial, environmental, and policy sectors is. The 84.6% response rate is indicative of strong participation and sufficient response to the survey to alleviate non-response bias. The demographic breadth in Nigeria enhances generalizability and empirically supports the validity of the structural analysis as measured SEM-PLS across the various institutions.

Table 2: Structural Model Results (SEM-PLS)

Hypothesis	Path Coefficient (β)	t-value	p-value	Decision
H_1	0.42	6.87	0.000	Supported
H_2	0.39	5.94	0.000	Supported
H_3	0.31	4.88	0.000	Supported
H_4	0.45	7.12	0.000	Supported
H_5	0.28	4.01	0.001	Supported

Note: R^2 (Sustainability Outcome) = 0.63

To quantify how each of the structural relations is contained within a confidence interval of 99%, the significance of the estimated relationships is analysed. Green fiscal policies have a significant impact on sustainable consumption (β=0.42) and climate action (β=0.39), thereby establishing fiscal tools as important drivers in the sustainability process. Bureaucratic behaviour, in contrast to fiscal policy, has a mediator (β=0.31) which legitimizes the behaviour of governance. Of all the dimensions of governance, institutional governance is the most direct (β=0.45), thereby affirming the importance of SDG 16. The interaction effect (β=0.28) demonstrates that the quality of governance reinforces the impact of fiscal policy. The adjusted R^2 of 0.63 is indicative of strong explanatory power. Thus, retaining all non-linear relationships, it is evident that fiscal-behavioural-institutional integration modelling predicts the sustainability of Nigeria.

DISCUSSION OF RESULTS

The empirical evaluation of the structural model, as detailed in the quantitative breakdowns of Table 2, provides robust statistical validation for the hypothesized causal relationships. By deploying Partial Least Squares Structural Equation Modeling (PLS-SEM) on a nationally representative survey dataset across all six geopolitical zones of Nigeria, this study unravels how green fiscal instruments, bureaucratic behavioral patterns, and institutional governance quality interact to determine structural sustainability outcomes.

Empirical Validation of SDG 12 and SDG 13 Outcomes (H1 & H2)

Addressing the first two research questions regarding the direct ecological impacts of financial engineering, the structural model demonstrates that green budgeting policies are potent predictors of both sustainable consumption behavior (H1: $\beta = .42$, $p < .001$) and climate action outcomes (H2: $\beta = .39$, $p < .001$). These strong positive coefficients directly answer the problem of policy stagnation by demonstrating that when ecological fiscal measures are structurally sound, they effectively drive the contraction of carbon-intensive consumption. Conversely, these findings statistically mirror the severe negative repercussions that occur when such policies are improperly or partially executed on the ground. Interpreting these results within the context of resource-dependent developing nations, the data illustrates that environmental levies, targeted carbon taxation, and structural subsidy removals send explicit price signals to the market, compelling corporate actors and individual consumers to transition toward waste-minimizing, circular economic practices. This finding aligns seamlessly with contemporary global literature which establishes that green public budgeting and climate-responsive fiscal engineering serve as foundational instruments for driving societal behavioral modifications and reducing aggregate carbon outputs (OECD, 2024). In the specific context of Nigeria, this empirical insight provides strong scientific justification for current legislative proposals aimed at aggressive petroleum subsidy reconfigurations and the expansion of environmental manufacturing taxes as corrective tools for sustainable development.

The Mediating and Moderating Implications of Bureaucratic Behavior (H3)

To resolve the third research inquiry regarding the administrative execution process, the model confirms that bureaucratic behavior exerts a significant and positive influence on the overall efficacy of the fiscal system ($\beta = .31$, $p < .001$). This finding validates the core assumptions of Public Choice Theory, demonstrating that public administrators are not merely neutral, value-free conduits of legislative intent; instead, their personal incentives, degree of career security, and administrative environment heavily dictate policy trajectories (deLeon, 1994). In terms of interpretation, these results reveal that civil service compliance controls, internal institutional incentives, and the mitigation of unchecked administrative discretion are the true operational determinants of fiscal policy success. In environments characterized by low oversight and weak internal accountability, the exercise of wide administrative discretion by state officials routinely results in regulatory capture or highly selective statutory enforcement, thereby economically crippling the intent of green taxes. This finding concurs directly with public administration literature which argues that while rigid, automated administrative compliance controls prevent systemic leakages, the setting of clear, transparent targets fundamentally optimizes regulatory compliance and public service delivery (Zamir & Sulitzeanu-Kenan, 2018). Consequently, focusing strictly on behavioral governance within the civil service is a non-negotiable prerequisite for translating fiscal policies into actual SDG 12 and SDG 13 achievements in West Africa.

Institutional Governance Quality as the Primary Catalyst (H4)

Answering the fourth research question regarding structural institutional effectiveness, the empirical results show that Institutional Governance Quality exerted the most powerful direct effect within the entire structural pathway ($\beta = .45$, $p < .001$). This overwhelming statistical significance provides unequivocal validation for both Institutional Theory and Governance Theory, confirming that the structural robustness of the organizational setting actively shapes public sector compliance.

Interpreting this high coefficient highlights that policy designs are structurally subservient to the quality of the implementing institutional framework; absent transparent public financial management, well-defined statutory regulations, and a firm adherence to the rule of law, environmental taxes degenerate into regressive revenue-extracting mechanisms with zero corrective ecological impact. This empirical reality is highly consistent with cross-national studies by (Mendes & Almeida, 2025), which demonstrate that nations possessing high institutional quality and transparent fiscal oversight display significantly superior environmental performance and vastly higher absorption efficiencies for international climate finance. For Nigeria, this finding underscores that macro-fiscal planning cannot achieve ecological optimization without simultaneous structural reforms that eliminate rent-seeking and rebuild public trust within the ecological fund systems, directly addressing the mandates of SDG 16.

Synergistic Interactions Between Fiscal Policy and Governance (H5)

Finally, addressing the fifth research inquiry regarding the systemic intersection of these forces, the model uncovers a highly significant and positive interaction effect between green fiscal tools and institutional governance quality ($\beta = .28$, $p < .001$). This statistical intersection indicates that green fiscal instruments do not operate optimally in a vacuum; their capacity to drive national environmental sustainability is exponentially amplified when they are embedded within a robust, transparent, and accountable governance ecosystem. This finding reinforces the arguments (Flankova et al., 2024) who prove that structural governance quality acts as a critical multiplier that enhances the legitimacy, public acceptance, and compliance rates of environmental financial incentives. When synthesized theoretically, these comprehensive findings exemplify Institutional Theory by demonstrating that institutional configurations dictate the ultimate utility of economic policy tools. Concurrently, Public Choice Theory is empirically validated through the prominent intermediary role of the bureaucracy, which accounts for the vast implementation variances across the six geopolitical zones. Furthermore, Governance Theory is robustly supported by illustrating that institutional quality matters both as a direct driver of institutional health (SDG 16) and as an interactive catalyst that prevents the administrative paralysis of fiscal reforms. Ultimately, this evaluative framework proves that to successfully capture the targets of SDG 12, SDG 13, and SDG 16, Nigeria's macroeconomic policy designs must look beyond traditional fiscal mechanics and be explicitly coupled with systemic structural adjustments, robust anti-corruption mechanisms, and behavioral civil-service nudges.

CONCLUSION AND SUGGESTIONS FOR FURTHER

This study provides conclusive empirical evidence that the implementation of green fiscal policies in Nigeria significantly accelerates the transition toward sustainable consumption patterns (SDG 12) and robust climate action outcomes (SDG 13). However, the central contribution of this research lies in demonstrating that these macroeconomic financial instruments do not operate optimally in an institutional vacuum. Instead, their efficiency is fundamentally mediated by accountable bureaucratic behavior and structurally amplified by the quality of institutional governance. Notably, institutional quality emerged as the single most powerful direct predictor within the structural model, proving that the statutory enforcement of the rule of law and transparent public financial management are non-negotiable prerequisites for environmental compliance. Ultimately, achieving the United Nations Sustainable Development Goals in a resource-dependent emerging economy requires a paradigm shift: moving away from traditional, isolated fiscal engineering and embracing an integrated, behavioral-institutional framework where financial incentives are strictly synchronized with deep bureaucratic anti-corruption reconfigurations (SDG 16).

Suggestions for Further Study

Based on the empirical boundaries and conceptual findings of this research, several strategic avenues are proposed for future scholarly investigation:

1. **Transition to Longitudinal Panel Data Frameworks:** Future research should move away from cross-sectional designs and utilize longitudinal panel datasets to track the multi-year macro-fiscal trajectories of ecological taxes and subsidy removals, thereby establishing long-term causal trends in environmental performance.

2. **Comparative Cross-Country Analysis:** To enhance contextual generalization across the Global South, longitudinal comparative studies encompassing multiple sub-Saharan African economies should be conducted to evaluate how varying degrees of institutional fragility affect the absorption efficiency of climate finance.
3. **Institutional Ethnography on Bureaucratic Discretion:** Future inquiries should deploy qualitative institutional ethnographies and deep behavioral interviews within ministries, departments, and agencies (MDAs). This approach will help deconstruct the micro-dynamics of administrative discretion, rent-seeking incentives, and resistance to environmental norm adoption among public officials.
4. **Investigation into Digital Governance Modalities:** A vital new core idea for future research is to explore how the deployment of digital public infrastructure (DPI)—such as blockchain-enabled ecological fund tracking and automated carbon pricing compliance systems—can minimize human bureaucratic intervention, mitigate corruption, and directly optimize fiscal transparency in developing nations.

Recommendations

The following are proposed to government officials, policy makers, and community leaders:

1. To enhance public trust and accountability, the government should provide straightforward and comprehensive reports detailing how environmental taxes and green funds are collected, allocated, and spent.
2. Government and policymakers must ensure continuous training of managers of green policies, in order to enhance their understanding, the consistency of their enforcement, and their commitment to the achievement of the environmental sustainability targets.
3. Policymakers and the government need to have good controls and equitable disciplinary measures to prevent the abuse of environmental funding to comply with green fiscal policy.
4. Government and policymakers must use accountable electronic systems to provide transparent and accountable green funds and to provide the ability to control and evaluate the outcomes of environmental projects' accountability.
5. Feedback mechanisms and public forums should help improve accountability and promote the application of green fiscal policies as a result of community and citizen engagement.
6. Advocating for transparency, institutional trust, and demonstrable sense of environmental performance, the Government must provide easily accessible annual reports concerning the progress on the SDGs 12, 13, and 16.

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