

## Citation:

Omoboye, O., Abdullateef, S., Yakubu, M., Abel, T. & Emmanuel, N. (2025) Sustainable Infrastructure Development: The Critical Role of Contract Auditing in Government-funded Construction [Online]. Leeds Beckett University. Available from: <a href="https://hdl.handle.net/10779/leedsbeckett.30438473.v1">https://hdl.handle.net/10779/leedsbeckett.30438473.v1</a> [Accessed 30 October 2025]. - Link

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# #623 - Sustainable Infrastructure Development: The Critical Role of Contract Auditing in Government-Funded Construction

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Keywords: Contract auditing, sustainable development, project governance, infrastructure management.

## **Abstract**

Government-funded construction projects in Nigeria are frequently undermined by cost overruns, delivery delays, and substandard outcomes, which hinder effective infrastructure governance. This study evaluates the perceived impacts of the nonadoption of contract auditing on such failures, with a specific focus on project governance, transparency, and institutional accountability. Sustainable infrastructure here refers to long-term public value, institutional trust, and economic efficiency beyond environmental indicators. While governance challenges have been broadly discussed in literature, the empirical implications of auditing gaps in construction remain underexplored, particularly in the Nigerian context. Focusing on Abuja, the federal capital territory, this study uses a post-positivist survey approach involving 304 construction professionals. Perceptions were analysed using the Relative Importance Index (RII) to identify and rank governance-related inefficiencies. The study reveals that perceived consequences include unmitigated contract violations (RII = 0.79), financial exposure, unemployment, and diminished public trust (RII = 0.41). Findings underscore that contract auditing, though not a panacea, is regarded as a vital governance tool for mitigating project risks, enhancing accountability, and supporting sustainable infrastructure delivery. The paper concludes with policy recommendations for institutionalising auditing practices in Nigeria's public procurement systems.

# Introduction

Sustainable infrastructure is not limited to physical systems that promote environmental resilience or energy efficiency, but includes governance structures that ensure continuity, stakeholder trust, and responsible public investment (Fazekas & Blum, 2021). In this light, contract auditing offers a lens through which transparency and oversight mechanisms can be understood as key contributors to sustainability. Rather than introducing novel theoretical concepts, this paper empirically examines how Nigerian construction professionals perceive

the consequences of weak auditing protocols on project outcomes. Sound governance ensures that projects deliver value for money, meet user needs, and avoid the systemic inefficiencies that have historically characterised large-scale infrastructure delivery in the Global South (World Bank, 2022; Adekunle and Agoh, 2023; Wahua et al., 2024). In developing countries such as Nigeria, government-funded construction projects frequently suffer from cost escalations, delays, substandard work, and in some cases, complete abandonment (Ameh and Osegbo, 2011; Baldi, et al., 2023; Bosio et al., 2022). These issues persist despite the existence of procurement and contract frameworks, largely due to weak enforcement and the absence of structured accountability mechanisms such as contract auditing (Iyer & Schoar, 2024; Berglöf & Claessens, 2006). While past studies have concentrated on procurement inefficiencies and contractor capacity (Chan and Chan, 2004; Kaming et al., 1997), few have systematically examined how the lack of contract auditing compromises project governance and, by extension, sustainable infrastructure development (Fazekas & Blum, 2021; U.S. Government Accountability Office, 2011).

Contract auditing, encompassing pre-, mid-, and post-contract evaluations to ensure compliance with scope, timelines, and budgets, has emerged in recent literature as a strategic tool for enhancing governance, reducing waste, and promoting transparency in construction projects (General Services Administration, 2025). Notably, the U.S. Government Accountability Office (2011) identifies contract auditing as instrumental in mitigating fraud, managing public funds efficiently, and improving outcomes in government projects. Despite these global trends, Nigeria's auditing systems remain fragmented and underutilised, particularly at sub-national and agency levels (Adekunle and Agoh, 2023; Wahua et al., 2024; Ofori, 2012).

This study focuses on Abuja, Nigeria's federal capital territory, where a high concentration of government-funded construction projects offers a suitable lens for examining the impact of non-adoption of contract auditing practices. As a central hub of national governance and policy implementation, Abuja reflects broader systemic issues in Nigeria's infrastructure governance (Efeosa-Temple et al., 2024, Ortom et al., 2024). The central research question guiding this inquiry is: What are the consequences of the non-adoption of contract auditing practices on the performance of government-funded construction projects in Abuja? To address this question, a structured quantitative survey was conducted with 304 construction professionals, selected through stratified random sampling to ensure stakeholder representation from government, consultancy, and contractor groups. The data were analysed using the Relative Importance Index (RII) to rank the severity and frequency of identified governance failures. This paper contributes empirical clarity to the relatively underexplored relationship between contract auditing and sustainable infrastructure delivery. The remainder of the paper is structured as follows: the next section presents the literature background, followed by the research methodology, results, discussion, and finally, conclusions and policy recommendations.

#### **Literature Review**

# 1. Sustainable Infrastructure and Governance Challenges

Sustainable infrastructure refers to the integration of economic, institutional, and social systems that promote long-term service delivery, efficient resource use, and community wellbeing (Fazekas & Blum, 2021). While technical and environmental considerations dominate the literature, a growing body of research links sustainability to governance structures, particularly in the public sector (Brezzi et al., 2021; Menezes et al., 2024). Inadequate oversight, policy inconsistency, and weak enforcement of regulations have been identified as major bottlenecks in sustainable infrastructure delivery across the Global South (World Bank, 2022; Ortom et al., 2024).

# 2. Contract Auditing: Principles, Instruments, and Global Practice

Contract auditing involves the systematic assessment of financial, procedural, and performance compliance across the project lifecycle—from pre-award evaluations to post-completion audits (Wahua et al., 2024). Tools often used include audit trails, benchmarking indices, risk-based audit frameworks, and automated red-flagging systems (General Services Administration, 2022; Dagunduro, 2023). In mature governance systems such as the United States and the EU, these instruments help uncover cost inflation, scope creep, and non-compliance with procurement laws (U.S. GAO, 2011; Bosio et al., 2022). These audit systems are embedded within national procurement policy frameworks, reducing discretionary power and reinforcing performance accountability. In contrast, Nigerian systems remain fragmented, with little institutional mandate for structured audits beyond financial statement review (Adekunle & Agoh, 2023).

## 3. Governance Failures in Nigerian Public Infrastructure Projects

The Nigerian construction sector continues to suffer from delayed completions, cost overruns, and service failure, especially in publicly funded projects (Ameh & Osegbo, 2011; Ewa, 2013). Literature attributes these issues not just to technical or contractor-related failings but to structural governance weaknesses, including limited external oversight and opaque audit mechanisms (Baldi et al., 2023; Ofori, 2012). Research also indicates that even when procurement laws exist, they are selectively implemented, with enforcement undermined by political and administrative interference (Ortom et al., 2024).

# 4. Empirical Gaps in Contract Auditing Literature

While the role of governance has been well-theorised, empirical assessments of how contract auditing affects public infrastructure outcomes remain scarce. Studies often offer normative recommendations rather than data-driven conclusions, with few investigations directly linking auditing practice to performance metrics (Flyvbjerg, 2009). Dagunduro (2023) notes that most African audit literature is disconnected from ground-level evidence, while Anikwe (2024) calls for sector-specific audit evaluations that reflect local administrative realities.

Assertions such as "contract auditing improves sustainability" require empirical grounding, not in idealised governance models, but in measurable stakeholder outcomes such as reduced project abandonment or enhanced trust. This study therefore responds to these calls by using structured surveys to evaluate how key actors in Abuja perceive the consequences of absent auditing protocols. It refrains from overclaiming causal quantification and instead focuses on ranked perceptions as proxies for governance failure.

# Methodology

This study adopts a post-positivist paradigm to explore the perceived consequences of the non-adoption of contract auditing in Nigeria's public construction sector. This philosophical orientation allows for objective data collection while recognising the influence of institutional context and stakeholder interpretation (Fazekas & Blum, 2021; Wahua et al., 2024).

# Research Design and Strategy

A structured quantitative survey approach was used to elicit practitioners' perceptions of the effects of audit absence in government-funded construction. This approach is appropriate for capturing patterns of experience across stakeholder groups and lends itself to statistical interpretation of governance-related variables (Adekunle & Agoh, 2023). The Federal Capital Territory (FCT), Abuja, was purposively selected for its concentration of federal projects and institutional proximity to national policy. Its role as a testing ground for procurement frameworks and governance initiatives makes it a suitable lens for evaluating audit-related performance issues (Baldi et al., 2023; Bosio et al., 2022).

A stratified random sampling technique was applied to draw 304 professionals from three categories: public sector agencies, consultancy firms, and contracting organisations. The strata were proportioned based on institutional size and frequency of participation in government-funded projects, ensuring representativeness of experience and institutional diversity.

## **Instrument Development and Validation**

The survey instrument consisted of closed-ended and 5-point Likert-scale items designed to measure respondents' perceptions of audit-related project consequences. Survey items were adapted and refined based on prior audit and governance literature (Ewa, 2013; Iyer & Schoar, 2024), and subjected to expert review by five senior construction professionals. A pilot test involving 15 respondents, excluded from the final sample, confirmed internal coherence and face validity. Construct reliability was evaluated using Cronbach's alpha, with all major subscales exceeding the recommended threshold of 0.70, indicating acceptable internal consistency.

# **Analytical Techniques**

Responses were analysed using the Relative Importance Index (RII), a well-established metric in construction research for prioritising variables based on perceived severity and frequency (Chan & Chan, 2004; Ameh & Osegbo, 2011). The RII was calculated for each item to determine its ranked importance from the respondents' perspective.

Importantly, this study does not claim to measure actual financial losses or audit compliance outcomes. Rather, it assesses the perceived impact of the absence of contract auditing across operational, financial, and reputational dimensions.

## **Classification of Effects**

The classification of survey items into "direct" and "indirect" effects was informed by a hybrid of literature synthesis and thematic categorisation during the pilot phase. Direct effects refer to immediate project-level consequences such as cost overrun or contractor disputes, while indirect effects include broader systemic impacts like diminished trust or weakened professional legitimacy. This distinction was reviewed and validated during expert consultations to enhance conceptual clarity.

#### **Research Results**

The analysis of responses from 304 construction professionals in Abuja reveals consistent patterns of perceived inefficiencies and governance failures attributed to the non-adoption of contract auditing. Using the Relative Importance Index (RII), the data were classified into "Direct" and "Indirect" effects, based on proximity to project execution and systemic impact, respectively.

# **Direct Effects of Non-Adoption of Contract Auditing**

Table 1 presents the ranked direct effects based on perceived severity. The findings of this study support the view that the absence of contract auditing mechanisms contributes meaningfully to the erosion of project accountability, efficiency, and credibility in Nigeria's public infrastructure space. Although the analysis was based on perceptions, the consistency across diverse stakeholder groups suggests an underlying recognition of audit absence as a critical governance gap.

For example, the top-ranked direct effect, unmitigated violation of contract clauses, points to a breakdown in procedural enforcement. This aligns with Saad (2020) and Dagunduro (2023), who stress the importance of mid-contract and post-contract review for sustaining delivery standards.

While this study reports perceptions of economic loss (e.g., contractor unemployment, client revenue erosion), it does not quantify these outcomes in monetary terms. Instead, RII scores serve as proxies to rank the severity of governance failures as experienced by respondents, offering insight into where auditing lapses are felt most acutely.

Less severe, yet still concerning, are the *social consequences* of stalled construction. *Discord between contractors and host communities* (RII = 0.58) disrupts project continuity and exacerbates local tensions. *Uncompleted sites as environmental eyesores* (RII = 0.45) and the *government's inability to deliver services* (RII = 0.42) rank lower but signal declining public confidence in state-led infrastructure (Olalusi and Otunola, 2012).

Table	1:	: Ranking of the		Direct	Eff	fects	of	Non-Adoption		ion o	of Contract		Auditing	
Direct effects					WEIGH/RESPONSE FREQUENCY									
					1	2	3	4	5	(∑f)	Mean	RII	Rank	Remark
of Co since activa	Unmitigated violation of Conditions of Contract of construction projects, since clauses that would have been activated as a result of contract audits remain dormant.				25	6	50	101	122	304	3.95	0.79	1	HF
Unen contr idle a	Unemployment is on the part of contractors whose resources are idle and clients whose projects remain uncompleted.				9	23	182	48	42	304	3.3	0.66	2	HF
Loss o	Loss of revenue by the client, which would have been realised if projects had been completed and use.				53	74	48	73	56	304	3.02	0.60	3	LF
Contr margi uncor	Contractor's losses of profit margin/income, as projects remain uncompleted, thus tying up contractor's resources.				0	105	129	42	28	304	2.98	0.60	3	LF
host	Discord between the contractor and host community over non-completion of projects.			23	77	120	70	14	304	2.92	0.58	5	LF	
Sites const	Sites of uncompleted projects constitute a societal menace and an environmental eyesore.				138	60	11	81	14	304	2.25	0.45	6	LF
provi becat	de serv	of the govoices to the ojects remaind.	people		133	67	53	37	14	304	2.12	0.42	7	LF

Source: Author (2025)

# **Indirect Effects of Non-Adoption of Contract Auditing**

Table 2 captures the broader societal and institutional consequences of audit neglect. Tied at the top are *loss of professional image* and *poor access to social services* (RII = 0.71 each). These suggest that beyond project metrics, contract auditing or its absence shapes public trust in professional competence and institutional legitimacy (Ewa, 2013). The inability to deliver infrastructure impairs the perceived authority of built environment professionals and hinders basic access to education, healthcare, and mobility (Tijani and Ajagbe, 2016).

The third-ranked effect is *resource wastage* (RII = 0.69), where uncompleted projects lock up fiscal allocations with little or no return. This reinforces arguments from Mansfield et al. (1994) and Olalusi and Otunola (2012), who stress the value of robust monitoring systems in ensuring capital efficiency. Lower-ranked effects include a *reduced effectiveness of procurement systems* and a *slowdown in economic growth* (RII = 0.58 each), both of which indicate deeper structural inefficiencies. At the base of the scale are *scarcity of social goods* (RII = 0.42) and *citizen loss of belief in government-funded projects* (RII = 0.41), highlighting the corrosive political and social fallout of audit-deficient governance (Ameh and Osegbo, 2011).

Table 2: Ranking of the Indirect Effects of Non-Adoption of Contract Auditing

Indirect effects	WEIGH/RESPONSE FREQUENCY									
	1	2	3	4	5	(∑f)	Mean	RII	Rank	Remark
Loss of public image of built	27	48	40	102	87	304	3.57	0.71	1	HF
environment professionals owing to the										
inability to use contract auditing to										
ensure the completion of construction										
projects.										
Poor access to social services and goods	31	20	85	86	82	304	3.55	0.71	1	HF
that would have been supplied by the										
uncompleted projects.										
Waste of resources that were invested	30	48	48	106	72	304	3.47	0.69	3	HF
into the uncompleted projects.										
Reduced effectiveness of the contract	102	35	30	67	70	304	2.89	0.58	4	LF
system in procurement of building and										
civil engineering projects.										
Slowdown in economic growth of the	70	62	59	61	52	304	2.88	0.58	4	LF
nation because of accumulation of										
uncompleted projects.										
Scarcity of social goods and services that	160	44	27	52	21	304	2.11	0.42	6	LF
would have been supplied by the										
uncompleted projects.										
Citizens' loss of belief in government	141	82	17	49	15	304	2.06	0.41	7	LF
funded projects										

Source: Author (2025)

Collectively, these findings expose a clear empirical pattern: non-adoption of contract auditing directly correlates with financial waste, legal uncertainty, unemployment, and diminished public trust. They reaffirm the argument that institutionalising contract auditing is not merely an administrative formality, but a necessary governance innovation for sustainable infrastructure delivery in Nigeria.

# Discussion

The findings of this study provide compelling empirical support for the argument that the non-adoption of contract auditing significantly undermines the performance, sustainability, and societal impact of government-funded construction projects in Nigeria. Both the direct and indirect effects identified in the results reveal how systemic lapses in audit mechanisms contribute to persistent governance failures that compromise economic efficiency, stakeholder trust, and public service delivery.

The high RII score for unmitigated contractual violations (0.79) points to a governance vacuum where contract provisions are neither monitored nor enforced, an issue highlighted in the work of Saad (2020) and Dagunduro (2023). This directly undermines sustainability, as projects stall without recourse, wasting public funds and tying up resources that could have supported other development priorities. As Love et al. (2005) argued, poorly administered contracts create rework and transaction inefficiencies that cascade through a project's lifecycle, intensifying cost and time overruns. The direct impact on unemployment and economic

instability among contractors further reinforces Kaming et al.'s (1997) view that weak oversight mechanisms reduce productive utilisation of labour and capital. However, this study extends the argument by quantifying the loss of client revenue and contractor profit, thereby providing a financial lens through which the consequences of audit failure can be better understood (Ameh and Osegbo, 2011).

The indirect effects, particularly the loss of public image among built environment professionals (RII = 0.71) and limited access to social goods, are critical yet often underexplored dimensions in the literature. These findings build upon Ewa (2013) and Menezes et al. (2024), who argue that trust and transparency are central to project governance. Without visible results and accountability, both the public and private sectors suffer reputational damage, which in turn affects future investment and community support. Furthermore, the results show that poor auditing correlates not only with tangible inefficiencies like resource waste (RII = 0.69), but also with intangible effects such as public scepticism (RII = 0.41) and institutional fatigue. These findings align with Anikwe (2024), who argued that sustainability must be measured not only in environmental terms but also in the effectiveness of institutional systems that support equitable infrastructure access.

The evidence affirms that contract auditing should not be viewed as a bureaucratic compliance activity but as a core governance tool for promoting sustainability. It enhances transparency, enforces contractual responsibilities, and helps restore trust in public infrastructure delivery. As observed in global best practices (U.S. GAO, 2011; World Bank, 2022), auditing frameworks provide early-warning systems for risk, reduce corruption, and ensure that infrastructure projects deliver intended societal benefits. This study's context, Abuja, as a microcosm of Nigeria's governance landscape, shows that systemic change is possible if auditing is mainstreamed into project governance protocols. The high RII scores for both technical and socio-political effects provide quantitative justification for integrating auditing into national procurement reform agendas (Adekunle and Agoh, 2023; Wahua et al., 2024; Baldi, et al., 2023; Bosio et al., 2022).

## Conclusion

This study contributes to the growing discourse on sustainable infrastructure delivery by empirically exploring the perceived consequences of audit absence in Nigeria's government-funded construction sector. Drawing from the responses of 304 construction professionals in Abuja, the study finds that non-adoption of contract auditing is widely perceived to contribute to unmitigated contractual violations (RII = 0.79), financial inefficiencies, and reputational damage to the built environment professionals (RII = 0.71).

While the study does not quantify financial or institutional failure in absolute terms, it highlights stakeholder consensus on the risks associated with weak audit structures. This reinforces the case for institutionalising contract auditing, not as a compliance formality, but as a governance mechanism aligned with principles of public accountability, fiscal transparency, and infrastructure integrity.

A crucial consideration emerging from this research is the need to understand contract auditing as more than a financial or compliance exercise; it is fundamentally linked to institutional transparency, stakeholder trust, and the long-term sustainability of public infrastructure. Identifying and addressing structural barriers, such as institutional inertia, regulatory inconsistency, and political influence, is essential for effective audit implementation in Nigeria.

This paper offers a novel empirical contribution by classifying the consequences of audit absence into direct and indirect effects, using stakeholder-ranked severity. This framework provides a diagnostic tool for assessing governance inefficiencies in developing contexts.

While stakeholder perceptions offer valuable insights into systemic governance failure, future research should aim to triangulate these findings with audit records and project completion data for further validation. Comparative analyses across Nigerian regions could also help identify contextual variations in audit implementation and outcomes.

In addition, exploring the integration of digital auditing innovations such as blockchain-based tracking systems and Al-enabled performance monitoring may present promising pathways for strengthening oversight mechanisms. Such investigations would advance understanding of contract auditing as a strategic enabler of sustainable infrastructure, generating evidence-based insights for reforming public procurement and governance systems in Nigeria and similar contexts.

### References

- Adekunle, C.A. and Agoh, G.I. (2023) Hindrances to effective public sector internal audit function in Nigeria: a literature review. *International Journal of Innovative Finance and Economics Research*, 11(3), pp.15–23. Available at: <a href="https://www.seahipublications.org/wp-content/uploads/2025/01/IJIFER-S-2-2023.pdf">https://www.seahipublications.org/wp-content/uploads/2025/01/IJIFER-S-2-2023.pdf</a> (Accessed: 12 August 2024).
- Ameh, O.J. and Osegbo, E.E. (2011) Study of relationship between time overrun and productivity on construction sites. *International Journal of Construction Supply Chain Management*, *1*(1), pp.56–65.
- Anikwe, N.J. (2024) Significance of construction contract auditing for enhanced integrity on large infrastructure projects. NIQS National Workshop. Available at: <a href="https://niqs.org.ng/wp-content/uploads/2024/08/8.-Nnaemeka-Anikwe-Japhet-Significance-of-construction-contract-auditing-for-enhanced-integrity-on-large-infrastructure-projects.pdf">https://niqs.org.ng/wp-content/uploads/2024/08/8.-Nnaemeka-Anikwe-Japhet-Significance-of-construction-contract-auditing-for-enhanced-integrity-on-large-infrastructure-projects.pdf</a> (Accessed: 19 December 2024).
- Baldi, S., Bottasso, A. and Conti, M. (2023) *Discretion and favoritism in public procurement*. Journal of the European Economic Association, 22(1), pp.117–147. Available at: <a href="https://academic.oup.com/jeea/article/22/1/117/7071896">https://academic.oup.com/jeea/article/22/1/117/7071896</a> (Accessed: 17 January 2024).
- Berglöf, E. and Claessens, S. (2006) Enforcement and good corporate governance in developing countries and transition economies. World Bank Research Observer, 21(1), pp.123–150.

  Available at:

  <a href="https://documents1.worldbank.org/curated/en/958121468148774249/pdf/767570JR">https://documents1.worldbank.org/curated/en/958121468148774249/pdf/767570JR</a>

  NOWBRO00Box374387B00PUBLICO.pdf
- Bosio, E., Djankov, S., Glaeser, E. and Shleifer, A. (2022) *Public procurement in law and practice*. American Economic Review, 112(4), pp.1091–1117. Available at: <a href="https://www.aeaweb.org/articles?id=10.1257/aer.20200738">https://www.aeaweb.org/articles?id=10.1257/aer.20200738</a> (Accessed: 16 October 2023).
- Brezzi, M., González, S., Nguyen, D. and Prats, M. (2021) An updated OECD framework on drivers of trust in public institutions to meet current and future challenges. OECD Working Papers on Public Governance, No. 48. OECD Publishing. Available at: <a href="https://doi.org/10.1787/b6c5478c-en">https://doi.org/10.1787/b6c5478c-en</a> (Accessed: 25 February 2024).
- Chan, A.P.C. and Chan, A.P.L. (2004) *Key performance indicators for measuring construction success*. Benchmarking: An International Journal, 11(2), pp.203–221. Available at: https://doi.org/10.1108/14635770410532624 (Accessed: 9 May 2023)
- Dagunduro, M. (2023) *In what way does artificial intelligence influence audit practice? Empirical evidence from Southwest Nigeria*. European Journal of Accounting, Auditing and Finance Research, 11(4), pp.58–73. Available at: <a href="https://doi.org/10.37745/ejaafr.2013/vol12n13555">https://doi.org/10.37745/ejaafr.2013/vol12n13555</a> (Accessed: 13 November 2024).
- Efeosa-Temple, C.G., Ejumudo, K.B.O. and Odukwe, E.U. (2024) *The challenges of good governance and project implementation in Nigeria: a review of public sector projects in Edo and Delta States*. American Journal of Humanities and Social Sciences Research,

- 8(4), pp.28–48. Available at: <a href="https://www.ajhssr.com/wp-content/uploads/2024/04/D248042848.pdf">https://www.ajhssr.com/wp-content/uploads/2024/04/D248042848.pdf</a> (Accessed: 14 January 2025).
- Ewa, U.E. (2013) Root causes of project abandonment in tertiary institutions in Nigeria. International Business Research, 6(11), pp.149–159. Available at: <a href="https://doi.org/10.5539/ibr.v6n11p149">https://doi.org/10.5539/ibr.v6n11p149</a> (Accessed: 18 January 2025).
- Fazekas, M. and Blum, J.R. (2021) Improving public procurement outcomes: review of tools and the state of the evidence base. Policy Research Working Paper 9690. World Bank. Available at: <a href="https://documents1.worldbank.org/curated/en/656521623167062285/pdf/Improving-Public-Procurement-Outcomes-Review-of-Tools-and-the-State-of-the-Evidence-Base.pdf">https://documents1.worldbank.org/curated/en/656521623167062285/pdf/Improving-Public-Procurement-Outcomes-Review-of-Tools-and-the-State-of-the-Evidence-Base.pdf</a> (Accessed: 13 July 2024)
- Flyvbjerg, B. (2009) *Survival of the unfittest: why the worst infrastructure gets built—and what we can do about it.* Oxford Review of Economic Policy, 25(3), pp.344–367. Available at: <a href="https://doi.org/10.1093/oxrep/grp024">https://doi.org/10.1093/oxrep/grp024</a> (Accessed: 13 July 2024).
- General Services Administration (2022) *Contract audit manual for federal construction projects*. U.S. Government Printing Office. Available at: <a href="https://www.gsa.gov/policy-regulations">https://www.gsa.gov/policy-regulations</a> (Accessed: 3 July 2025).
- General Services Administration (2025) *Civilian contract auditing services ordering guide (SIN 541211)*. Available at: <a href="https://www.gsa.gov/system/files/541211%20Civilian%20Contract%20Auditing%20Services%20Ordering%20Guide">https://www.gsa.gov/system/files/541211%20Civilian%20Contract%20Auditing%20Services%20Ordering%20Guide</a> June2025.pdf (Accessed: 24 June 2025).
- lyer, R. and Schoar, A. (2024) *Contracting when enforcement is weak: evidence from an audit study*. Review of Finance, 28(5), pp.1513–1536. Available at: <a href="https://academic.oup.com/rof/article/28/5/1513/7713285">https://academic.oup.com/rof/article/28/5/1513/7713285</a> (Accessed: 21 December 2024).
- Kaming, P.F., Olomolaiye, P.O., Holt, G.D. and Harris, F.C. (1997) Factors influencing construction time and cost overruns on high-rise projects in Indonesia. Construction Management and Economics, 15(1), pp.83–94. Available at: https://doi.org/10.1080/014461997373132 (Accessed: 13 July 2024).
- Love, P.E.D., Liu, J., Matthews, J., Sing, C.P., Smith, J. and Regan, M. (2015) Future proofing public-private partnerships: life-cycle performance measurement and building information modelling. Automation in Construction, 56, pp.26–35. Available at: <a href="https://doi.org/10.1016/j.autcon.2015.04.008">https://doi.org/10.1016/j.autcon.2015.04.008</a> (Accessed: 13 July 2024).
- Mansfield, N.R., Ugwu, O.O. and Doran, T. (1994) *Causes of delay and cost overruns in Nigerian construction projects*. International Journal of Project Management, 12(4), pp.254–260. Available at: <a href="https://doi.org/10.1016/0263-7863(94)90050-7">https://doi.org/10.1016/0263-7863(94)90050-7</a> (Accessed: 13 July 2024).
- Menezes, U. dos S., de Mendonça, C.M.C. and de Carvalho, K.M. (2024) *The role of integrity programs in enhancing municipality governance: an integrative systematic literature review.* IOSR Journal of Business and Management, 26(6), pp.1–8. Available at: <a href="https://www.iosrjournals.org/iosr-jbm/papers/Vol26-issue6/Ser-7/A2606070108.pdf">https://www.iosrjournals.org/iosr-jbm/papers/Vol26-issue6/Ser-7/A2606070108.pdf</a> (Accessed: 14 August 2024).
- Ofori, G. (ed.) (2012) New perspectives on construction in developing countries. London: Routledge.

- Olalusi, O. and Otunola, A. (2012) *Abandonment of building projects in Nigeria a review of causes and solutions*. International Conference on Chemical, Civil Environment Engineering (ICCEE'2012), Dubai, 50(20), pp.24–26.
- Ortom, E.E., Okwo, J. and Ibukun, F.B. (2024) *The state and challenges of infrastructural development in Nigeria*. Research Journal of Humanities, Legal Studies & International Development, 6(1), pp.1–13. Available at: <a href="https://internationalpolicybrief.org/wp-content/uploads/2024/08/ARTICLE-13-4.pdf">https://internationalpolicybrief.org/wp-content/uploads/2024/08/ARTICLE-13-4.pdf</a> (Accessed: 13 August 2024).
- Saad, S. (2020) Construction contracts and auditing practices in project management. International Journal of Project Auditing, 9(2), pp.101–120.
- Tijani, M. and Ajagbe, W. (2016) *Professional view on the causes-effects of construction projects abandonment in Ibadan metropolis, Nigeria*. Ethiopian Journal of Environmental Studies and Management, 9(5), p.593. Available at: <a href="https://doi.org/10.4314/ejesm.v9i5.6">https://doi.org/10.4314/ejesm.v9i5.6</a> (Accessed: 13 August 2024).
- U.S. Government Accountability Office (2011) *Contract audits: role in helping ensure effective oversight and reducing improper payments (GAO-11-331T)*. Available at: <a href="https://www.gao.gov/assets/gao-11-331t.pdf">https://www.gao.gov/assets/gao-11-331t.pdf</a> (Accessed: 13 August 2024).
- Wahua, L., Anderson, P.D., Chava, P. and Sam, S. (2024) *Public sector audit reforms and financial management*. Journal of Advanced Research and Multidisciplinary Studies, 4(4), pp.71–88. Available at: <a href="https://abjournals.org/jarms/wp-content/uploads/sites/21/journal/published paper/volume-4/issue-4/JARMS\_VRCUIRIR.pdf">https://abjournals.org/jarms/wp-content/uploads/sites/21/journal/published paper/volume-4/issue-4/JARMS\_VRCUIRIR.pdf</a> (Accessed: 2 January 2025).
- World Bank (2022) *Quality Infrastructure Investment Partnership: 2022 annual report*. World Bank Group. Available at:

  <a href="https://documents1.worldbank.org/curated/en/099441301272313615/pdf/IDU0cce15">https://documents1.worldbank.org/curated/en/099441301272313615/pdf/IDU0cce15</a>

  3c100d0e04c040b18a0babeafe98613.pdf (Accessed: 11 November 2024).