

Barriers to Implementing Turnkey Procurement Method in Construction Projects in Lagos State, Nigeria

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ABSTRACT

This study investigates the barriers limiting the adoption of turnkey procurement in construction projects within Lagos State, Nigeria. Driven by chronic project delays, cost overruns, and quality deficiencies associated with traditional design-bid-build approaches, alternative procurement strategies like turnkey have gained attention; however, their uptake remains minimal. Utilizing a quantitative survey design, structured questionnaires were administered to 120 construction professionals (contractors, consultants, and clients) in Eti-Osa and Ikeja Local Government Areas, yielding 62 valid responses (51.67% response rate). Data were analyzed using Relative Importance Index (RII) and mean score rankings across 25 barrier variables categorized into five thematic clusters. The findings reveal that Financial & Economic Barriers rank as the single most critical category (Group RII = 0.834). Severe material cost inflation (Mean = 4.371, RII = 0.874), foreign exchange volatility (Mean = 4.339, RII = 0.868), and exorbitant commercial lending rates (RII = 0.835) emerged as the top individual constraints. Regulatory/Legal barriers (Group RII = 0.738) and Institutional/Behavioral factors (Group RII = 0.734), notably corruption (RII = 0.803), further hinder adoption. The study concludes that the fixed-price nature of turnkey procurement is structurally unviable under Nigeria's current macroeconomic instability without regulatory reform, standard contract forms, and targeted financial risk-mitigation frameworks.

Keywords: Barriers, Construction, Procurement, Projects, Turnkey

Aims Research Journal Reference Format:

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1. INTRODUCTION

The construction industry plays a pivotal role in driving socio-economic growth, infrastructure development, and employment generation in developing nations like Nigeria. However, the performance of construction projects in urban economic hubs such as Lagos State has historically been plagued by significant schedule delays, budget overruns, and client dissatisfaction (Akintoye, 2000; Naoum, 2013). These recurring performance failures are frequently attributed to the continuous reliance on the traditional procurement approach (Design-Bid-Build), which inherently separates the design and construction phases, leading to fragmented communication, adversarial relationships, and misaligned project goals (Babatunde et al., 2019). In addition, it is important to note that the benefits associated with the adoption of the turnkey procurement method constitute a further dimension of the research problem.

Leo-Olagbaye and Idowu (2019) conducted a comparative study of cost and time performance of traditional and design-build procurement systems in Ondo State, Nigeria, and found that design-build delivery demonstrated measurable performance advantages over the traditional method, particularly in relation to time certainty and cost predictability.

To mitigate these structural deficiencies, integrated procurement options, particularly the turnkey procurement method (and its close variant, Engineering, Procurement, and Construction (EPC), have been increasingly advocated in infrastructure development literature. Under a turnkey model, a single entity assumes single-point responsibility for the entire lifecycle of a project, encompassing design, procurement, construction, and commissioning, thereby offering clients a guaranteed single price and fixed completion timeline (Ojo, 2018). Despite its established advantages in minimizing variation claims and streamlining accountability, the adoption of turnkey procurement in Nigeria, and Lagos State in particular, remains remarkably low compared to conventional routes (Odediran et al., 2016; Ogunsanya et al., 2019).

Prior scholarly efforts have investigated the impediments to innovative and sustainable procurement adoption in the Nigerian built environment. For instance, Ogunsanya et al. (2019) conducted an exploratory factor analysis among construction stakeholders, revealing that sustainable procurement approaches are hindered by governance and transparency weaknesses, policy mismatches, and knowledge deficits. Similarly, Hassana et al. (2022) highlighted that lack of institutional capacity and low client awareness restrict the uptake of integrated project delivery models in Nigeria. Furthermore, recent empirical studies on EPC and alternative procurement in Nigeria stress that severe macroeconomic instability, foreign currency devaluations, and hyper-inflation in raw material costs severely destabilize fixed-price contractual arrangements (Imoni, 2023).

Despite these broader contributions, a critical gap persists in the empirical literature. Most existing studies focus broadly on "alternative" or "sustainable" procurement without isolating turnkey delivery as an independent unit of investigation. Furthermore, prior research has largely examined the broader national context or relied on homogenous samples of contractors, neglecting the multi-stakeholder dynamic involving clients, professional consultants, and contractors within high-density commercial markets like Lagos State. Given Lagos State's unique regulatory landscape (such as the Lagos State Public Procurement Law 2011) and its intense urban development pressures, an empirically grounded assessment of turnkey procurement barriers is vital. Therefore, this study empirically evaluates the regulatory, financial, capacity, institutional, and awareness barriers constraining the adoption of turnkey procurement in Lagos State, drawing on perspectives from contractors, consultants, and client organizations.

1.1 Statement of the Research Problem

Through an exploratory factor analysis of 320 Nigerian construction professionals by Ogunsanya, Aigbavboa and Thwala (2019), four major categories of barriers to alternative procurement adoption were recognised: sustainability knowledge deficits, governance and transparency weaknesses, mismatches between procurement strategy and national policy, and operational construction industry factors. Their study concluded that there is no robust regulatory framework in Nigeria for integrating innovative procurement approaches, and that poor economic conditions and a lack of professional capacity constitute persistent impediments. Hassana et al. (2022), examining barriers to procurement innovation in Nigeria, confirmed that a lack of awareness and institutional capacity remains among the most significant constraints limiting the uptake of integrated delivery models.

These studies were, however, based on other Nigerian states and focused on alternative procurement broadly, without isolating turnkey procurement as a distinct category of investigation. The methodological approach across most existing barrier-related studies also relied on structured questionnaires administered to contractors alone, thereby omitting the perspectives of clients and professional consultants. This study therefore identifies the barriers limiting the adoption of turnkey procurement specifically in Lagos State, drawing on a multi-stakeholder sample encompassing contractors, consultants, and clients.

2. LITERATURE REVIEW

The identification of barriers limiting the use of turnkey procurement on construction projects in Lagos State, Nigeria, constitutes the second objective of this study. The existing literature identifies a comprehensive array of barriers operating across regulatory, capacity, financial, institutional, and knowledge dimensions. These barriers are synthesised from studies conducted in Nigeria and across the broader Sub-Saharan African context, and are presented in detail below. Figures1 and 2 illustrate the ranked importance and thematic clustering of these barriers as synthesised from the literature, while Table 1 provides a comprehensive structured analysis.

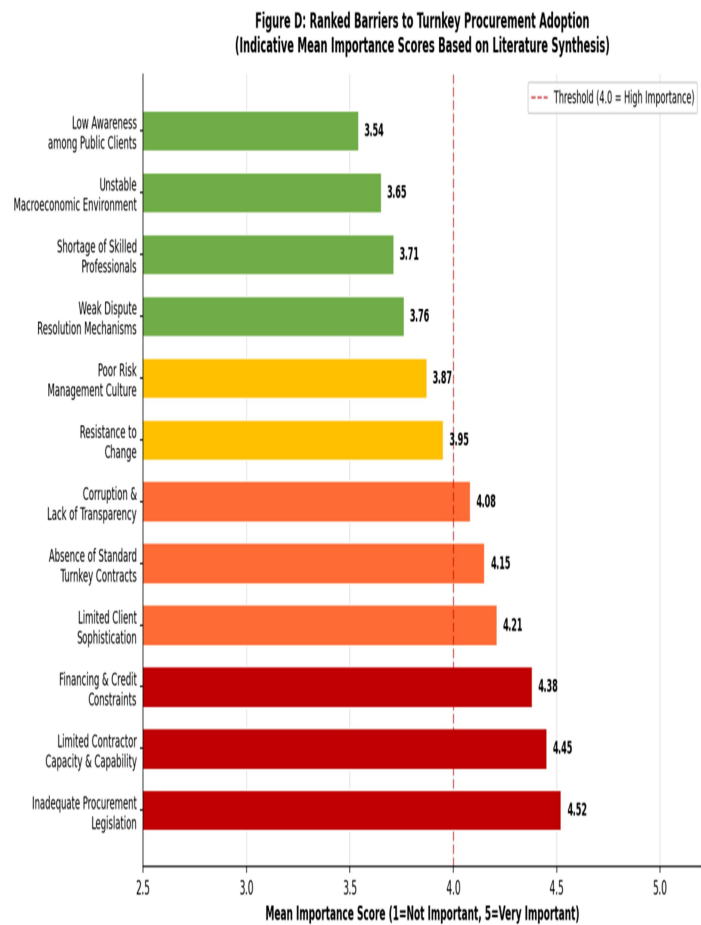


Figure 1: Ranked Barriers to Turnkey Procurement Adoption in Nigeria (Indicative Mean Importance Scores Based on Literature Synthesis).
Source: Author's Compilation (2026)

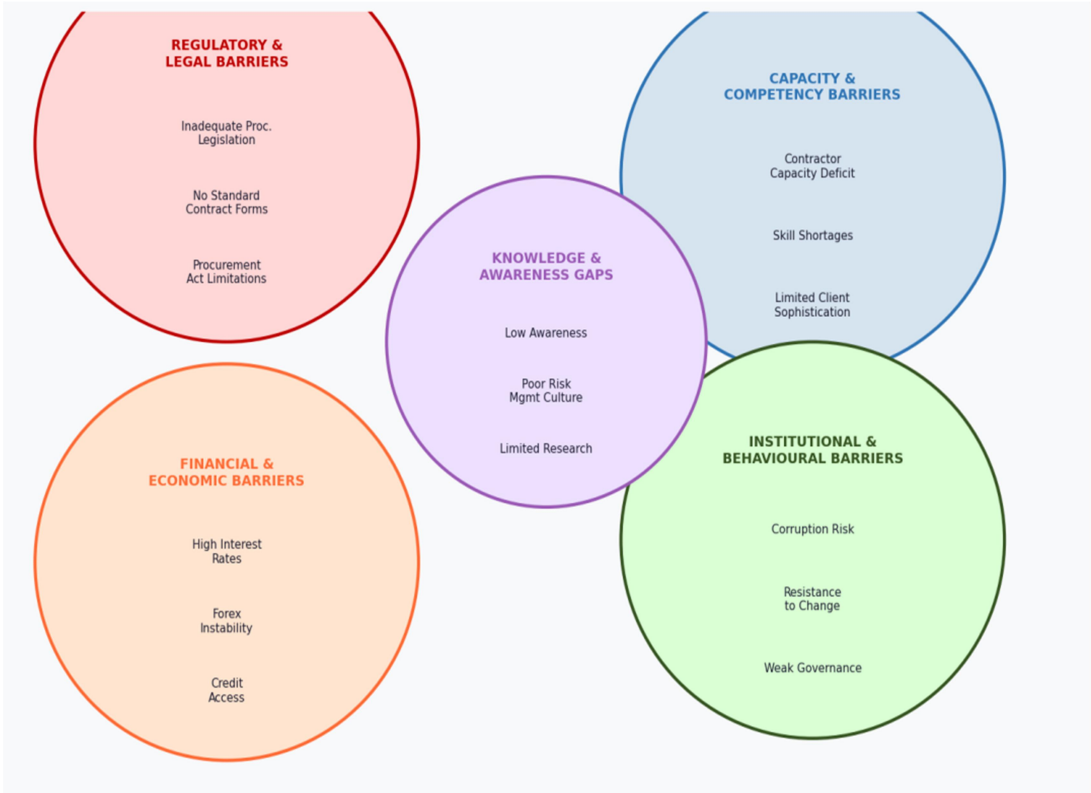


Figure 2: Thematic Clusters of Barriers to Turnkey Procurement Adoption in Nigeria.
Source: Author's Compilation (2026)

Table 1: Comprehensive Analysis of Barriers to Turnkey Procurement Adoption in Nigeria

S/N	Barrier Category	Specific Barrier	Detailed Explanation
1	REGULATORY & LEGAL	Inadequate Procurement Legislation	The Public Procurement Act 2007 and state equivalents were designed with the traditional procurement model in mind, prescribing itemised bills of quantities and open competitive tendering procedures that are incompatible with the integrated, lump-sum, performance-specification model of turnkey procurement. Public sector clients face legal ambiguity about whether turnkey contracts are permissible under existing law, and procurement officers risk audit queries from the Bureau of Public Procurement when proposing non-standard procurement routes (Babatunde et al., 2019).
2	REGULATORY & LEGAL	Absence of Standard Turnkey Contract Forms	Nigeria lacks a locally developed, widely accepted standard form of turnkey contract. Practitioners are forced to rely on bespoke documents or unadapted international forms such as the FIDIC Silver Book, which may not be fully enforceable or contextually appropriate under Nigerian law. This creates legal uncertainty, increases transaction costs, and discourages risk-averse clients from adopting the method (Ojo, 2018).

S/N	Barrier Category	Specific Barrier	Detailed Explanation
3	REGULATORY & LEGAL	Land Use Act Constraints	The Land Use Act (Cap L5 LFN 2004) requires the issuance of a Certificate of Occupancy before development proceeds. In turnkey contracts, where the contractor must begin design and procurement rapidly after award, delays in obtaining land titles or regulatory approvals can erode the programme benefits of turnkey procurement and expose the contractor to significant financial holding costs (Olawale & Sun, 2015).
4	CAPACITY & COMPETENCY	Shortage of Capable Indigenous Contractors	Successful turnkey delivery demands integrated capabilities spanning engineering design, procurement management, construction execution, and commissioning. Odediran et al. (2016) found that fewer than 15% of FOCl-registered contractors had executed a building sector turnkey contract, with most such experience concentrated in contractors with international affiliations or foreign technical partnerships. This capacity deficit means that turnkey contracts are frequently awarded to international contractors, raising concerns about local content and value repatriation.
5	CAPACITY & COMPETENCY	Limited Client Technical Sophistication	The turnkey client must prepare a comprehensive and technically robust Employer's Requirements document before tendering. In the Nigerian public sector, where technical capacity is often limited and project briefs are poorly articulated, producing adequate Employer's Requirements is a significant challenge. Poorly prepared briefs inevitably lead to scope gaps, disputes, and performance failures that are falsely attributed to the turnkey method itself (Ogunsemi & Jagboro, 2016).
6	CAPACITY & COMPETENCY	Professional Knowledge Gaps	Nigerian professional education in architecture, engineering, and quantity surveying is predominantly oriented toward the traditional procurement model. Few universities or professional bodies offer curricula on integrated procurement, Employer's Requirements preparation, or turnkey contract management. This knowledge gap means that even where clients wish to adopt turnkey procurement, they frequently lack the in-house expertise to manage the procurement process effectively (Nkado, 2014).
7	FINANCIAL & ECONOMIC	High Cost of Borrowing and Pre-Financing Requirement	Turnkey contracts require the contractor to pre-finance design, procurement, and early construction activities before milestone payment thresholds are reached. In Nigeria's lending environment, where commercial lending rates consistently exceed 20–25% per annum, the cost of pre-financing is prohibitive for most indigenous contractors. This effectively limits turnkey competition to large multinational contractors with cheaper access to international capital, reducing competitive pressure and inflating tender prices (Olawale & Sun, 2015).

S/N	Barrier Category	Specific Barrier	Detailed Explanation
8	FINANCIAL & ECONOMIC	Foreign Exchange Instability	Nigerian construction projects involve significant quantities of imported materials and equipment priced in foreign currencies. The Nigerian naira depreciated by over 70% against the US dollar between 2022 and 2024, creating severe cost uncertainty for lump-sum turnkey contractors. Risk of currency fluctuation must be priced as a premium into bids, further inflating contract costs and reducing the cost competitiveness of turnkey relative to reimbursable alternatives (Babatunde et al., 2019).
9	FINANCIAL & ECONOMIC	Macroeconomic Instability and Construction Cost Inflation	Nigerian construction input costs such as cement, steel, diesel, aluminium, escalated by over 40% in some categories between 2021 and 2024, driven by naira devaluation, fuel subsidy removal, and global supply chain disruptions. In lump-sum turnkey contracts, contractors bearing the full cost of materials escalation must include very large contingency allowances, inflating bid prices and rendering the method financially unattractive compared to reimbursable options (Olawale & Sun, 2015).
10	INSTITUTIONAL & BEHAVIOURAL	Corruption and Lack of Transparency	The integrated contractor structure of turnkey procurement makes it more difficult for third parties to assess whether the contract sum represents value for money, creating conditions that can facilitate corrupt practices. Public officials may prefer the traditional system, which provides more extractive opportunities through variation claims, over the fixed-price turnkey model. Olawale and Sun (2015) found that corruption was perceived as a significant barrier to procurement reform in Nigeria.
11	INSTITUTIONAL & BEHAVIOURAL	Professional Resistance to Change	The traditional procurement system sustains distinct professional roles like independent architect, engineer, quantity surveyor supported by associations (NIA, COREN, NIQS) with vested interests in maintaining the client-side advisory functions the traditional model assigns to them. These professional bodies, through influence on procurement policy and client advisory relationships, have historically resisted integrated procurement methods. Overcoming this resistance requires both regulatory reform and a cultural evolution in the professional community (Oyewobi et al., 2016).
12	INSTITUTIONAL & BEHAVIOURAL	Weak Contract Enforcement Mechanisms	The effectiveness of a lump-sum turnkey contract depends on the client's ability to enforce contractor obligations regarding quality, commissioning, and defect rectification. Nigerian courts, while improving in commercial matters in Lagos, remain slow and expensive. The risk that a turnkey contractor in breach cannot be effectively compelled to remedy defects acts as a deterrent to client (Ojo, 2018).

S/N	Barrier Category	Specific Barrier	Detailed Explanation
13	KNOWLEDGE & AWARENESS	Low Awareness Among Public Sector Clients	Babatunde et al. (2019) found that while 73% of private sector professionals had awareness of turnkey procurement, awareness among public sector client representatives was approximately 45%. Public sector procurement officers trained in the traditional model may be unaware of the turnkey option, may not understand its mechanics, or may be institutionally discouraged from proposing non-standard procurement approaches that could attract regulatory scrutiny.
14	KNOWLEDGE & AWARENESS	Insufficient Local Research and Evidence	The academic and professional literature on turnkey procurement in Nigeria is sparse compared to the extensive body of evidence available for traditional procurement. In the absence of locally validated case studies and performance benchmarks specific to the Nigerian construction context, decision-makers cannot make evidence-based choices about turnkey adoption. This research gap which the current study is specifically designed to address perpetuates reliance on familiar but suboptimal procurement methods (Nkado, 2014).
15	KNOWLEDGE & AWARENESS	Inadequate Professional Development Provision	COREN, NIA, and NIQS offer continuing professional development programmes, but these devote very limited attention to integrated procurement methods, Employer's Requirements preparation, or turnkey contract administration. Without structured professional development pathways for turnkey-related competencies, the knowledge base of the Nigerian construction professional community will remain oriented toward traditional procurement, reinforcing the institutional inertia that the regulatory barriers perpetuate (Oyewobi et al., 2016).

Source: Adapted from Babatunde et al. (2019), Ojo (2018), Odediran et al. (2016), Olawale & Sun (2015), Oyewobi et al. (2016)

2.1 Regulatory and Legal Barriers

The regulatory framework governing public procurement in Nigeria constitutes perhaps the most structurally entrenched barrier to the widespread adoption of turnkey procurement in the public sector. The Public Procurement Act (PPA) 2007 which governs federal procurement and the Lagos State Public Procurement Law 2011 were designed with the traditional Bills of Quantities-based model as the presumptive standard. These instruments prescribe detailed procedures for competitive tendering of Bills of Quantities contracts, establish the structure and powers of procurement authorities, and define acceptable forms of pricing and variation, all structured around the traditional paradigm.

Critically, neither instrument expressly contemplates or provides procedures for turnkey procurement, performance-specification contracting, or design-build arrangements in the public sector (Babatunde et al., 2019). This legislative lacuna creates significant uncertainty for public sector procurement officers who may wish to adopt a turnkey approach. In the risk-averse culture of Nigerian public sector administration where procurement officers face personal liability for non-compliant decisions this legal uncertainty acts as a powerful deterrent to experimentation with non-standard procurement methods.

The absence of standard, domestically developed turnkey contract forms compounds this regulatory barrier further. Unlike the United Kingdom, which has the JCT Design and Build Contract 2016 and the NEC4 Engineering and Construction Contract, Nigeria lacks equivalent domestically developed and legally tested standard contract forms for turnkey procurement (Ojo, 2018). The Land Use Act imposes additional regulatory delays on turnkey projects, as requirements for Certificate of Occupancy and development permit approvals can extend for months or years in Lagos State. Since the turnkey contractor bears programme risk under a fixed completion date contract, these external delays create significant financial exposure that must be priced into the bid, eroding the cost advantages of the turnkey approach (Olawale & Sun, 2015).

2.2 Capacity and Competency Barriers

The delivery of a successful turnkey project demands that the contractor possess a comprehensive and integrated range of capabilities spanning engineering design, procurement management, construction execution, systems integration, and commissioning. This integrated capability requirement goes considerably beyond what is necessary for traditional construction contracting. Odediran et al. (2016) found that fewer than 15% of contractors registered with the Federation of Construction Industry (FOCI) possessed the in-house design capability, procurement management systems, and commissioning expertise necessary to credibly execute a building sector turnkey contract without extensive reliance on overseas consultants. This capacity deficit means that Nigerian turnkey projects particularly in technically demanding sectors are dominated by international EPC contractors, raising legitimate concerns about local content, technology transfer, and the long-term development of Nigerian contractor capability.

The capacity barrier on the client side is equally significant. Preparing a robust Employer's Requirements document which is the foundational instrument upon which the entire turnkey contract depends requires the client to articulate its needs and performance expectations comprehensively and unambiguously before the contractor begins design. This demands a level of technical sophistication and design management experience that is often absent in Nigerian public sector client organisations. Ogunsemi and Jagboro (2016) found that inadequately prepared project briefs were a leading cause of disputes and poor performance in Nigerian integrated procurement projects, and that building client capacity in brief preparation was essential for any sustainable expansion of turnkey procurement in the public sector.

The shortage of specialist integrated procurement professionals further compounds the capacity barrier. Professional bodies such as COREN, NIA, and NIQS structure their education and continuing professional development programmes primarily around the traditional procurement paradigm. There is limited provision for training in Employer's Requirements preparation, risk management in lump-sum contracts, or FIDIC Silver Book contract administration. Nkado (2014) notes that this professional education gap means that even where institutional will to adopt turnkey procurement exists, the human capital to implement it effectively remains scarce.

2.3 Financial and Economic Barriers

The financial barriers to turnkey adoption in Nigeria operate at multiple levels, affecting both the contractor's ability to competitively bid and execute turnkey contracts and the client's ability to make an informed financial comparison between turnkey and alternative procurement approaches. At the contractor level, the most significant barrier is the pre-financing requirement. Under a typical turnkey contract, the contractor must commit substantial financial resources to detailed design, equipment procurement, and early construction activities before the project milestone payment schedule releases significant revenue. In Nigeria's lending environment where commercial bank lending rates to construction companies have consistently exceeded 20 -25% per annum, the cost of this pre-financing is prohibitive for most indigenous contractors (Olawale & Sun, 2015).

The macroeconomic volatility of the Nigerian operating environment compounds the financial barrier considerably. The Nigerian naira experienced severe devaluation between 2022 and 2024, losing approximately 70% of its value against the US dollar following the removal of the managed exchange rate policy. For turnkey projects with significant imported materials and equipment content which in Nigeria's construction sector includes substantial proportions of steel, electrical equipment, and mechanical plant, this currency volatility translates directly into cost uncertainty that is very difficult to manage within a fixed lump-sum structure. Contractors must either accept significant currency exposure within the fixed price or price substantial risk premiums, both of which produce sub-optimal outcomes for the project's overall value proposition (Babatunde et al., 2019).

Construction materials price inflation adds a further layer of financial uncertainty. Between 2021 and 2024, construction input cost inflation in Nigeria exceeded 40% in some categories, driven by global commodity market volatility, fuel cost increases following subsidy removal, and import duty changes. Without effective price escalation mechanisms, the lump-sum structure of turnkey contracts becomes financially untenable for contractors in high-inflation environments, forcing very large contingency allowances into bids and further inflating contract prices above what a reimbursable alternative would cost (Olawale & Sun, 2015).

2.4 Institutional and Behavioural Barriers

Beyond structural barriers, the adoption of turnkey procurement in Nigeria faces significant institutional and behavioural resistance rooted in the established culture and professional interests of the construction industry. Corruption and governance deficits represent one of the most complex contextual barriers. The integrated structure of turnkey procurement, while advantageous for accountability, simultaneously creates conditions that can facilitate corrupt practices. Because the turnkey contractor controls the entire design and cost development process, it is more difficult for third parties to assess whether the contract sum represents value for money or contains inflated allowances. Olawale and Sun (2015) found that corrupt practices were frequently perpetuated by officials who benefited from the extractive opportunities that the traditional procurement system's variation mechanisms provided opportunities that the fixed-price turnkey model would substantially reduce.

Professional resistance to change operates as a deeply embedded institutional barrier. The traditional procurement system sustains distinct and well-remunerated professional roles for independent architects, engineers, and quantity surveyors. In a turnkey contract, these roles are absorbed into the contractor's organisation, fundamentally reducing the influence and income of independent consultants. Professional associations with vested interests in the traditional model therefore resist turnkey adoption through their influence on procurement policy, professional education, and client advisory relationships (Oyewobi et al., 2016). The weakness of contract enforcement and dispute resolution mechanisms in Nigeria constitutes a further institutional barrier that is particularly acute for turnkey contracts, where the client's ability to enforce commissioning obligations and quality warranties depends critically on an effective legal system (Ojo, 2018).

2.5 Knowledge and Awareness Gaps

The final cluster of barriers relates to inadequate knowledge and awareness of turnkey procurement within the Nigerian construction market. Babatunde et al. (2019) found that while large private sector clients and multinational organisations in Lagos State had reasonable awareness of turnkey procurement concepts, awareness among local government development authorities, state-owned enterprises, and smaller private clients was strikingly low, with significant confusion between turnkey, design-build, and concession arrangements. Clients who are unaware of the method cannot consider it during procurement selection, regardless of its potential suitability.

The paucity of locally validated research on turnkey procurement performance in Nigeria creates a related knowledge gap at the evidence level. Nigerian construction clients and policy-makers rightly question whether international evidence on turnkey performance translates to the Nigerian context, given significant differences in contractor market structure, regulatory environment, and materials cost dynamics. In the absence of locally generated evidence, clients default to the familiar traditional approach. This is precisely the research gap that the current study seeks to fill for the Lagos State construction context. Furthermore, the inadequacy of professional development programmes on integrated procurement noted across COREN, NIA, and NIQS means that the knowledge base of the Nigerian construction professional community remains oriented toward traditional procurement, perpetuating the inertia that the regulatory and institutional barriers reinforce (Nkado, 2014; Oyewobi et al., 2016).

3. METHODOLOGY

An investigation in the form of a questionnaire survey was conducted to examine the limiting barriers of the use of the turnkey procurement method on construction projects in Lagos State, Nigeria. The relevant information was obtained through the field survey by means of a structured questionnaire administered to construction professionals in Eti-Osa and Ikeja Local Government Areas of Lagos State, selected due to their dominance of construction activity and high concentration of construction companies and professional firms within the state.

The population of the survey constituted all categories of construction professionals practising within the two Local Government Areas, including contractors, consultants comprising architects, quantity surveyors, and engineers, project managers, property developers, and public and private sector client representatives. Stratified purposive sampling was employed to select 120 construction professionals from the accessible population, distributed proportionately across the two Local Government Areas. This research used a sample size of 120 questionnaires distributed to the identified construction professionals, and 62 were returned and used for analysis, representing a response rate of 51.67%. Akintoye (2000) and Naoum (2013) established that a response rate of 50 per cent and above is considered good for construction management questionnaire surveys; the achieved response rate was therefore considered satisfactory.

The questionnaire was divided into two sections: Section A contained respondent background information including professional qualification, years of experience, nature of organisation, and level of familiarity with and direct involvement in turnkey projects; Section B contained the five categories of barriers aforementioned in the literature review limiting the use of turnkey procurement on construction projects in Lagos State. For the purpose of this study, the five categories were further divided into twenty-five barrier statements and placed on a 5-point scale ranging from Very Significant (5) to Not Significant (1) in the form of statements. The data were analysed using SPSS (Statistical Package for the Social Sciences) software. Descriptive statistics comprising frequencies, percentages and mean scores, were used to analyse the responses, with items ranked in descending order of mean score.

4. FINDINGS AND DISCUSSIONS

Twenty-five barrier statements in Section B were analysed using mean scores and RII. Group RII values were calculated for each of the five barrier sub-categories to enable ranked comparison. Table 2 presents all twenty-five barrier items ranked by individual RII within their sub-categories, and Table 3 presents the Group RII ranking.

Table 2: Mean Scores and RII - Barriers to Turnkey Adoption (Section C), N = 62

Code	Barrier to Turnkey Adoption	Mean	RII	Rank
C3.3	Severe inflation in construction material costs renders the lump-sum structure of turnkey contracts financially unviable	4.371	0.874	1
C3.2	Foreign exchange instability and naira devaluation make it very difficult to maintain fixed-price lump-sum turnkey contracts	4.339	0.868	2
C3.1	High commercial bank lending rates in Nigeria make pre-financing of turnkey contracts prohibitively expensive	4.177	0.835	3
C3.4	Large risk premiums required in turnkey bids make the method more expensive at tender stage	4.048	0.810	4
C4.1	Corruption in the Nigerian construction industry is a barrier to transparent adoption of turnkey procurement	4.016	0.803	5
C3.5	Limited access of Nigerian contractors to international capital markets reduces competitiveness in turnkey bidding	3.919	0.784	6
C4.4	Weak contract enforcement mechanisms in Nigeria reduce client confidence in turnkey performance guarantees	3.855	0.771	7
C5.5	Lack of procurement guidelines and standard procedures specifically for turnkey contracts in Nigerian public sector	3.839	0.768	8
C1.2	The absence of a locally developed standard form of turnkey contract in Nigeria creates legal uncertainty	3.823	0.765	9
C2.1	There is a shortage of indigenous Nigerian contractors with the integrated capability required for turnkey delivery	3.806	0.761	10
C1.3	BPP scrutiny of non-standard procurement methods discourages public sector clients from adopting turnkey	3.758	0.752	11
C1.4	Delays in obtaining land titles, permits, and Certificates of Occupancy under the Land Use Act compound turnkey challenges	3.710	0.742	12
C4.5	Institutional inertia and lack of political will to reform procurement legislation hinder turnkey adoption	3.710	0.742	12
C2.2	Most Lagos contractors lack the in-house engineering design capability required for turnkey projects	3.645	0.729	14
C5.2	Insufficient locally validated research and case studies on turnkey performance in Nigeria restricts evidence-based adoption	3.629	0.726	15
C1.1	The Public Procurement Act (2007) and state procurement laws are incompatible with the turnkey model	3.613	0.723	16
C5.4	Confusion between turnkey, design-build, and PPP/BOT procurement methods among practitioners limits informed adoption	3.613	0.723	16
C5.3	Inadequate CPD programmes on turnkey procurement from professional bodies (COREN, NIA, NIQS) limits awareness	3.597	0.719	18

Code	Barrier to Turnkey Adoption	Mean	RII	Rank
C5.1	Low awareness of the turnkey method among public sector clients in Lagos State limits its adoption	3.581	0.716	19
C2.4	Clients lack the technical sophistication to prepare comprehensive Employer's Requirements documents	3.565	0.713	20
C4.3	The risk-averse culture of Nigerian public sector clients discourages experimentation with turnkey delivery	3.565	0.713	20
C1.5	Insufficient clarity in Nigerian contract law on the enforceability of lump-sum EPC provisions	3.548	0.710	22
C2.5	Nigerian construction professionals lack adequate training in integrated procurement and EPC management	3.484	0.697	23
C2.3	Limited experience with commissioning and handover reduces contractor competitiveness in turnkey bidding	3.323	0.665	24
C4.2	Professional resistance by independent consultants whose roles are diminished under turnkey limits adoption	3.210	0.642	25

Source: Field Survey (2026)

Table 3: Group RII Ranking - Barrier Sub-Categories

Rank	Barrier Sub-Category	No. of Items	Group Mean	Group RII	Significance Level
1	C3 - Financial & Economic Barriers	5	4.171	0.834	VERY HIGH
2	C1 - Regulatory & Legal Barriers	5	3.690	0.738	HIGH
3	C4 -Institutional & Behavioural Barriers	5	3.671	0.734	HIGH
4	C5 - Knowledge & Awareness Barriers	5	3.652	0.730	HIGH
5	C2 - Contractor Capacity Barriers	5	3.565	0.713	HIGH

Source: Field Survey (2026) | RII: ≥0.80 Very High; 0.70–0.79 High; 0.60–0.69 Moderate

The analysis confirms that Financial and Economic Barriers constitute the most critical category of constraints on turnkey adoption in Lagos State (Group RII = 0.834 - VERY HIGH). The two highest-ranked individual barriers in the entire study were C3.3 (Severe material cost inflation, Mean = 4.371, RII = 0.874) and C3.2 (Foreign exchange instability and naira devaluation, Mean = 4.339, RII = 0.868). These two items ranked first and second across all 25 barrier statements, with mean scores above 4.30 which is the highest in the study, reflecting near-universal agreement that macroeconomic instability is the most critical constraint. The dominance of financial barriers reflects the fundamental structural incompatibility between the lump-sum fixed-price model of turnkey procurement and Nigeria's macroeconomic environment. This finding extends the work of Ogunsanya et al. (2019), who identified economic conditions as a persistent impediment but did not specifically isolate forex and inflation as the most critical factors.

Regulatory and Legal Barriers ranked second (Group RII = 0.738), with the absence of a Nigerian standard turnkey contract form (C1.2, RII = 0.765) and BPP scrutiny (C1.3, RII = 0.752) as the leading regulatory constraints. Institutional and Behavioural Barriers ranked third (Group RII = 0.734), led by corruption (C4.1, RII = 0.803 - the only non-financial barrier to exceed 0.80). Knowledge and Awareness Barriers ranked fourth (Group RII = 0.730), while Contractor Capacity Barriers ranked last (Group RII = 0.713), confirming that macroeconomic, regulatory, and governance barriers are more immediately constraining than technical capacity deficits. Notably, C4.2 (Professional resistance by consultants, RII = 0.642) recorded the lowest individual barrier score, indicating that unlike findings from some international studies, professional self-interest is not perceived as a significant constraint in the Lagos State context.

5. CONCLUSION

The study concludes that barriers to turnkey procurement adoption in Lagos State are both numerous and cross-cutting, but are clearly dominated by financial and macroeconomic constraints that are structurally embedded in the Nigerian economic environment. The analysis of twenty-five barrier statements across five sub-categories produced a Financial and Economic Barriers group RII of 0.834, the only sub-category to achieve a VERY HIGH significance rating and the highest group RII of any barrier cluster in the study. This finding establishes macroeconomic instability as the primary systemic constraint on turnkey adoption, with a margin of 0.096 RII points separating the financial sub-category from the second-ranked Regulatory and Legal Barriers cluster (Group RII = 0.738).

Severe construction material cost inflation (C3.3, Mean = 4.371, RII = 0.874) and foreign exchange instability and naira devaluation (C3.2, Mean = 4.339, RII = 0.868) ranked as the two most significant individual barriers in the entire study, with near-universal respondent agreement and mean scores exceeding 4.30 and the highest individual item means recorded across all four sections of the questionnaire. High commercial bank lending rates (C3.1, RII = 0.835) and large risk premiums in turnkey bids (C3.4, RII = 0.810) ranked third and fourth respectively, all rated VERY HIGH. The collective dominance of these four financial items confirms that the lump-sum fixed-price model of turnkey contracts is fundamentally incompatible with the Nigerian macroeconomic environment, where chronic currency instability, double-digit material cost inflation, and high-cost financing make price certainty at the point of contract award unsustainable for indigenous contractors.

Corruption (C4.1, RII = 0.803) was the only non-financial item to exceed the Very High threshold and ranked fifth overall, confirming that governance and transparency weaknesses within the Nigerian construction industry compound the macroeconomic barriers by reducing client confidence in contractor accountability under the single-point responsibility framework. Regulatory and Legal Barriers ranked second (Group RII = 0.738), led by the absence of a Nigerian standard turnkey contract form (C1.2, RII = 0.765) and BPP scrutiny of non-standard procurement methods (C1.3, RII = 0.752). Knowledge and Awareness Barriers ranked fourth (Group RII = 0.730), while Contractor Capacity Barriers ranked last and lowest (Group RII = 0.713), with limited commissioning experience (C2.3, RII = 0.665) and professional resistance by consultants (C4.2, RII = 0.642) as the lowest-rated individual barriers in the study.

In summary, this study concludes that strategies to promote wider turnkey adoption in Lagos State cannot focus on capacity building or professional training alone. The dominant barriers require macroeconomic policy interventions, legal and regulatory reform, and governance improvements that lie substantially outside the control of individual industry participants or professional bodies, confirming that procurement reform in this context is necessarily a multi-level challenge spanning national economic policy, procurement legislation, and professional practice simultaneously.

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