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Systemic Corruption and Public Water Provision in Nigeria: A Qualitative Study of Institutional Drivers, Service Delivery and Social Consequences

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Abstract

Systemic corruption represents a persistent governance challenge for public water provision in Nigeria, where institutional weaknesses can undermine service reliability, infrastructure development and equitable access. This study examines stakeholders' perceptions of the prevalence, manifestations, drivers and consequences of corruption within Nigeria's water provision sector, while identifying measures for strengthening accountability. The study adopted the qualitative research method using a semi-structured and unstructured telephone interview with 18 respondents representing a range of stakeholders, including public utility officials, civil society and regulatory stakeholders, private water providers and water contractors, and community representatives. Thematic analysis was used for data analysis which resulted in four broad themes. Participants referred to corruption as present and prevalent, and reported misappropriation, procurement malpractice, bribery, nepotism, inadequate regulatory systems and other

administrative practices as important forms of corruption. Corruption was seen to be contributing to poor infrastructure, unreliable service delivery, poor water resource management, social injustice, environmental pressures and loss of public trust. Its persistence was attributed to the lack of transparency and accountability, political interference, poor regulation enforcement, restricted protection for whistleblowers, and sociocultural acceptance and institutional limitations. The study suggests that the opportunities afforded by information asymmetry and weak monitoring are explored through Principal-Agent Theory and how the corrupt practices become normalised and reproduced through institutional theory. The overall conclusions is that there is a need for integrated reforms focused on transparency, independent oversight, protection of whistleblowers, participation of stakeholders and capacity development.

Keywords: Systemic Corruption, Public Water Provision, Water Governance, Principal-Agent Theory, Institutional Theory

1. Introduction

The universal and equitable access to safe and affordable drinking water, to which SDG 6 is dedicated, puts high expectations on the States to build effective institutions for the governance of water resources (United Nations, 2015) ^[41]. However, there is still uneven progress towards this goal, especially in developing nations where population growth, urbanization, environmental stress, and lack of infrastructure combine with institutional shortcomings (Cosgrove & Loucks, 2015; Herrera, 2019) ^[21, 27]. This focus on water scarcity and scarce investment leads to explanations that focus solely on these factors, and not on another more subtle but important factor, namely the quality and integrity of governance in which water resources and water infrastructure are managed.

Corruption plays an important role in this governance nexus because water provision requires significant public spending, involves a complex procurement process, technical discretion and substantial information asymmetry between decision makers, service providers and citizens. These attributes open the door to rents being charged along the service chain, such as project allocation, tendering, contract management, infrastructure maintenance, billing, and front line service delivery. Water and sanitation sector evidence shows that corruption can lead to higher service costs, misinvestments, and poorer water service quality and access, turning governance failures into 'material inequalities in water access' (Anbarci *et al.*, 2009) ^[8]. However, corruption must not be used as an excuse for all the water-service failures. Poor financing, weak technical capacity, disjointed institutional mandates, and high population growth and environmental pressures each have the potential to negatively impact provision (Cosgrove & Loucks, 2015) ^[21]. Thus, the challenge is analytical, not only to identify how these structural constraints

affect service failure, but also to understand what happens when corrupt practices occur.

This challenge is especially pertinent in Nigeria. The country has a significant surface water and groundwater resource base, yet the continuity, quality and fair access to public water services remains an issue in the country all year round (Ibrahim *et al.*, 2022) ^[28]. In the case of Abuja, research findings show that the assessment of public water services is not only based on the presence of water infrastructure but also on multiple dimensions involving its reliability, accessibility and service quality, suggesting that simply providing water infrastructure does not automatically ensure effective water services provision (Abubakar, 2016) ^[2]. Similarly, studies of Nigeria's rural water sector identify persistent policy and implementation gaps that constrain sustainable service delivery (Chukwuma, 2018) ^[20]. The resulting service deficits have encouraged households and communities to rely on alternative providers and informal water markets, potentially shifting the financial burden of inadequate public provision towards citizens. Thus, the Nigerian water problem is not reducible to a deficit of physical infrastructure; it also reflects the institutional arrangements through which infrastructure is financed, constructed, maintained and accessed.

Corruption is one of the significant aspects of such arrangements. The link between fraudulent practices and the lack of good procurement controls and infrastructural development has been established in Nigerian public sector studies many times (Adekunle & Olusa, 2021) ^[3]; at the same time, public procurement scholarship has pointed to on-going problems with transparency, accountability and institutional oversight (Igwe *et al.*, 2021) ^[29]. The Nigerian corruption literature, however, takes a general macro-governance approach, and water sector studies often focus on provision of infrastructure, access to water, policy implementation or water resource management. This separation leaves insufficient understanding of the mechanisms through which corruption becomes embedded within the everyday organisation of public water provision. Comparative evidence from Kenya suggests that corruption in water services may encompass both high-level institutional practices and lower-level interactions between officials, providers and users (Onyango & K'Akumu, 2022) ^[37], but comparable qualitative evidence examining these interconnected processes within Nigeria remains comparatively limited.

The present study addresses this gap by examining systemic corruption as an institutional process rather than simply an aggregation of isolated corrupt transactions. It investigates how corruption may emerge across the public water provision chain, the institutional and political conditions that enable its persistence, and the consequences perceived by stakeholders for infrastructure, service reliability, affordability and social equity. The study is informed by Principal-Agent Theory and Institutional Theory. Principal-Agent Theory provides a lens for analysing information asymmetry, discretionary authority and inadequate monitoring between public officials, contractors, utilities and citizens (Bosse & Phillips, 2016; Bergh *et al.*, 2019) ^[16, 13]. Institutional Theory complements this perspective by explaining how practices can become normalised and reproduced through formal rules, informal norms, organisational routines and political relationships (Scott, 2013; Lawrence *et al.*, 2013) ^[40, 32]. Their combination

therefore permits corruption to be examined simultaneously as an incentive problem and as an institutionalised pattern of organisational behaviour.

Accordingly, the study asks: What forms and manifestations of corruption are perceived to occur within Nigeria's water provision sector? What institutional, political, economic and sociocultural factors are perceived to sustain corrupt practices within the sector? How do stakeholders perceive corruption to affect water service delivery, infrastructure, water-resource management and social equity? The article empirically contributes to the few studies on water corruption in Nigeria and theoretically links individual incentives and information asymmetries with the institutional processes that generate such corruption. It also contends that increasing the quantity of water provision is not enough - it must be accompanied by the right governance structures to limit discretion, enhance transparency, and hold service providers 'accountable' to the communities they serve.

2. Literature Review and Theoretical Framework

2.1 Systemic Corruption and Public-Service Governance

The conventional concept of corruption is defined as the inappropriate use of public power for personal interests (Mugellini *et al.*, 2021) ^[34]; this approach may however mask the institutional nature of corruption. In public-service contexts, corruption can go beyond the level of bribery to include, in addition, patronage, manipulation of procurement processes, diversion of services, preferential allocation, collusive relations between political and commercial actors, and so on (Bardhan, 2017; Castro, Phillips & Ansari, 2020) ^[12, 19]. It is thus significant to make the distinction between 'individual' and 'systemic' corruption. Whereas individual corruption implies deviations from otherwise functional institutional rules, systemic corruption suggests that informal practices have become sufficiently embedded within organisational and political structures to influence how formal rules are interpreted and implemented (Scott, 2013) ^[40].

This distinction has significant implications for public infrastructure. If the monitoring is inadequate and the administrative discretion is large, then public resources could be diverted from social production to private extraction. Adekunle & Olusa (2021) ^[3] for instance, link the fraudulent practices in Nigeria to infrastructural weaknesses, while Atakpa and Akpan (2023) ^[11] identify corruption as a manifestation of Nigerian public administration's general weaknesses. However, the correlation should not be taken as causality. Infrastructure failure may also arise from inadequate financing, poor technical expertise, weak planning and institutional fragmentation. The more persuasive position is consequently that corruption can interact with these constraints by reducing the effectiveness of resources that are already scarce.

The water sector is particularly vulnerable because service provision requires substantial capital expenditure, technically complex contracts and continuing interaction between public agencies, contractors and consumers. Anbarci *et al.* (2009) ^[8], using cross-national evidence, identify a statistically significant negative association between public-sector corruption and access to improved drinking water and sanitation. This provides an important empirical basis for treating corruption as more than an

administrative irregularity: it can have distributive consequences for access to essential services. Yet macro-level associations do not explain precisely how corruption translates into deteriorating infrastructure or unequal provision. A sector-specific analysis must therefore examine the organisational processes through which resources are allocated, contracts implemented and services delivered.

2.2 Corruption and Water Provision

Water governance involves considerably more than the physical extraction and distribution of water. It encompasses regulation, infrastructure investment, procurement, tariff setting, maintenance, monitoring and relationships between utilities and users (Jiménez *et al.*, 2020) [30]. Consequently, weaknesses at any stage may undermine the effectiveness of the entire service chain. Corruption can intervene at several points, from politically influenced project selection and inflated contracts to non-execution of projects, diversion of materials and informal payments for routine services. The cumulative consequence may be particularly damaging because water infrastructure is capital-intensive but operationally interdependent: a poorly constructed pipeline, inadequate maintenance contract or manipulated procurement decision can compromise service provision beyond the immediate transaction.

The literature nevertheless reveals an important theoretical tension. One perspective treats corruption primarily as a transaction that increases the private returns to officials or intermediaries (Castro *et al.*, 2020) [19]. Another understands it as a governance phenomenon sustained by institutional arrangements that make corrupt behaviour predictable, socially tolerated or organisationally rational (Fayad 2023) [24]. The latter perspective is particularly relevant to water services because repeated failures can generate informal alternatives, including private vendors and tanker markets, which may themselves become incorporated into the local political economy of water. Thus, corruption may simultaneously weaken public provision and create commercial opportunities around the resulting scarcity.

Evidence from African water sectors reinforces this argument. Onyango and K'Akumu (2022) [37], examining Kenya, identify corruption as a factor affecting water provision through institutional and operational mechanisms. Similarly, research on Nigerian urban water provision identifies corruption alongside inadequate investment, infrastructure deterioration, weak policy implementation and limited autonomy of State Water Agencies as significant challenges (Adeoti *et al.*, 2023) [4]. The implication is that corruption should neither be isolated from wider institutional dysfunction nor treated as merely one problem among many. Its distinctive significance lies in its capacity to redirect institutional resources and decision-making processes in ways that reproduce those wider dysfunctions.

2.3 Water Governance in Nigeria

Nigeria is a very interesting context in which these relationships can be examined, as the problems it faces in the water sector are infrastructural, institutional and political. The public water services experiences studied in Nigeria revealed water scarcity, low water pressure, inefficient metering and billing systems, poor infrastructure maintenance, inequitable service distribution and low level of community participation (Apatinga *et al.*, 2022) [10]. These findings question the notion that simply adding

infrastructure will solve the problems of deficiencies in services. Rather, the effectiveness of infrastructure depends on governance arrangements capable of maintaining assets, monitoring performance and ensuring equitable distribution. A review of water infrastructure governance research in Nigeria similarly identifies infrastructure financing, repeated system malfunctioning and decentralised infrastructure arrangements as persistent concerns. Chukwuma (2018) [20] highlights policy gaps affecting rural water supply, suggesting that institutional weaknesses operate across both urban and rural contexts. Ibrahim *et al.* (2022) [28] further emphasise the complexity of Nigeria's water-resource management environment. Collectively, this literature indicates that Nigeria's water crisis cannot be adequately explained through resource scarcity alone.

More critically, recent scholarship has begun to connect water governance directly to political economy. Okolie *et al.* (2022) [36], examining public procurement in Nigeria's WASH sector, challenge the assumption that inadequate enforcement alone explains procurement dysfunction. They argue that procurement mechanisms themselves can be appropriated by powerful interests, including through manipulation of the 'lowest responsive bidder' principle. This is particularly significant for the present study because it shifts the analytical question from whether formal rules exist to whose interests those rules ultimately serve. It also suggests that strengthening regulation without addressing political and organisational incentives may produce only limited improvements.

2.4 Principal-Agent Theory

Principal-Agent Theory provides the first theoretical foundation for understanding the mechanisms through which corruption can occur. The theory conceptualises relationships in which a principal delegates authority to an agent whose actions cannot be perfectly observed (Jensen & Meckling, 1919) [43]. There are many such relationships in public water governance: citizens give power to elected officials, governments give water agency power to implement, water agencies give contractors power to build, and managers give frontline employees the power to operate. Each delegation potentially creates information asymmetry and monitoring difficulties.

Under these conditions, agents may exploit informational advantages or discretionary authority to pursue private interests, particularly where sanctions are weak. Dhami and Al-Nowaihi (2007) [23] demonstrate theoretically that corruption, bribery and public-sector production are closely connected to hierarchical asymmetric information. Bergh *et al.* (2019) [13] similarly emphasise the significance of information asymmetry for organisational decision-making. From this perspective, procurement manipulation, inflated billing or unofficial payments become possible because those responsible for oversight cannot perfectly observe the actions of implementing actors.

However, Principal-Agent Theory has limitations. Its emphasis on rational actors and monitoring can imply that corruption will decline once incentives and information problems are corrected.

2.5 Institutional Theory

The institutional theory is focused directly on this same limitation, moving from individual incentives to rules, norms and organisational structures which influence

behaviour. Institutions are formal regulatory structures and informal expectations of what is acceptable, legitimate or practically necessary, from a behavioral point of view (Scott, 2013) [40]. From this perspective, systemic corruption may persist because organisational actors operate within institutional environments where informal practices coexist with formal anti-corruption rules.

Lawrence *et al.* (2013) [32] emphasise the importance of institutional work in understanding how institutions are maintained, disrupted and reproduced. This is especially true for public water systems, where formal procurement procedures could coexist with informal forms of political influence, patronage and obligations. Consistent with this, Caballero and Soto-Oñate (2015) [18] show that institutional change is not only about the formal modification of rules; existing interests and institutional legacies influence the way institutional reform is taken up and implemented.

Institutional Theory therefore provides an explanation for the persistence of corruption where Principal-Agent Theory identifies the opportunities for it. If corrupt practices become routinised, new employees may learn them as organisational expectations rather than exceptional violations. This helps explain why repeated administrative reforms may coexist with continuing corruption. The problem is not necessarily the absence of rules, but the possibility of decoupling between formal institutional prescriptions and actual organisational practices.

2.6 Theoretical Synthesis and Research Gap

The two theories are consequently complementary rather than competing. Principal-Agent Theory explains why opportunities for corruption emerge, particularly through information asymmetry, discretion and weak monitoring (Lukashuk, 2024) [33]; Institutional Theory explains why those opportunities may become persistent and normalised within organisational and political environments (Aksom & Tymchenko, 2020) [6]. They facilitate a view of systemic corruption as having a self-reinforcing character, whereby with weak monitoring, rent-seeking opportunities are created; with repeated rent-seeking, informal practices are encouraged; and with weak accountability, the effectiveness of monitoring is further eroded.

Despite growing scholarship on Nigerian water governance, an important empirical gap remains. Existing research has examined water-service quality, infrastructure governance, policy weaknesses and procurement politics, while corruption scholarship has often treated public-sector corruption at a broad national level. What remains comparatively underdeveloped is a qualitative account connecting corruption across the water-service chain - from procurement and infrastructure development to operational practices and user-level consequences - and explaining how institutional and political conditions sustain these practices. The present study addresses this gap through multi-stakeholder qualitative evidence, using Principal-Agent Theory and Institutional Theory jointly to examine not only the manifestations of corruption but also the mechanisms through which it becomes embedded in the governance of public water provision in Nigeria.

3. Methodology

3.1 Research Philosophy and Design

The study was conducted with an intent to understand the construction of meaning by the stakeholders on corruption

and public water provision. Under the lens of interpretivism, organisational and governance phenomena is a socially constructed process of interaction, institutional expectations and contextual experiences (Altheide & Johnson, 2011; Chowdhury, 2014) [7, 44]. This orientation was especially apt, as the abuse of power may take the form of something that is not formally illegal, yet accepted or even expected as a customary way of doing business. It is thus important to gain insights into the perceptions of public officials, contractors, civil-society actors and representatives of the community regarding these practices in order to be able to follow up with other quantitative indicators.

Qualitative, cross sectional research design was used. Qualitative inquiry is well suited when the goal is to describe complex institutional processes and to account for the experiences of stakeholders instead of to determine population parameters (Patton, 2015). The cross-sectional design enabled the study to capture participants' accounts of corruption and water-service provision at a particular period, while allowing comparison across different stakeholder positions within the sector. The design was informed by an interpretive case-oriented logic, treating public water provision in Nigeria as the substantive setting within which corruption, institutional practices and service consequences were examined (Andrade, 2009; Yin, 2017) [45, 42].

3.2 Study Participants and Sampling

Purposive sampling and snowball sampling were used for selection of participants. Purposive sampling was used to identify participants with first-hand knowledge of the provision, governance, procurement, regulation, and community-level access to public water, whereas snowball sampling was used to access participants who might have been hard to recruit using other methods (Patton, 2015) [38]. The joint approach was especially significant in the context of the study of corruption, which is highly sensitive, as the interviewees might not want to talk about institutional practices with strangers.

Eighteen (18) stakeholders participated in the study. The sample included five (5) public utility officials, four (4) civil-society and regulatory actors, four (4) private water vendors and contractors, and five (5) community representatives. This multifaceted stakeholder mix was analytically significant because, as the case of corruption in water provision, relationships between actors are positioned differently within the chain of governance and service delivery. The use of several perspectives allowed to minimize the need to use a single institutional narrative, and made it possible to explore the convergence and tension that can be seen between different stakeholder narratives.

Participants were eligible if they had experience at a professional, commercial or community level in the provision of water, and possessed the necessary knowledge to engage in discussion on water governance and service-delivery processes. Recruitment continued until the dataset was judged sufficiently rich to address the research questions. Consistent with qualitative methodological guidance, adequacy was assessed through the depth, relevance and recurrence of accounts rather than by assuming that a predetermined numerical threshold automatically established saturation (Patton, 2015) [38]. Given the sensitivity of the subject, participants were identified throughout the study as P1 - P18 rather than by name or organisational identifier.

3.3 Data Collection

Data were collected through semi-structured and, where appropriate, unstructured telephone interviews, lasting approximately 15-25 minutes. Semi-structured interviewing provided sufficient consistency to ensure that the principal research questions were addressed while allowing participants to introduce experiences and interpretations that were not anticipated by the researcher (Blandford, 2013) [14]. Interview questions explored perceived forms of corruption, procurement and financial practices, institutional and political drivers, effects on infrastructure and service reliability, consequences for communities, and possible mechanisms for improving accountability.

Where participants were spread out across several locations, and where face-to-face access was limited, telephone interviewing became suitable. However, a telephone interview can limit observation of non-verbal communication and can impact rapport, especially when talking about sensitive topics (Block and Erskine, 2012) [15]. Probing questions were used to overcome these, and participants were given time to 'fill in' their answers, a consistent interviewing procedure was used and confidentiality was strengthened at the start of each interview.

With participants' consent, interviews were audio-recorded and subsequently transcribed verbatim. Identifying information was removed during transcription and replaced with participant codes. Importantly, statements concerning alleged corrupt conduct were treated as participants' accounts and perceptions rather than independently verified factual findings. This distinction was essential both ethically and analytically, given the potential reputational consequences of attributing allegations to identifiable individuals or organisations.

3.4 Data Analysis

Thematic analysis was conducted on the interview data, following mainly the six phases outlined by Braun and Clarke (2006) [17]. The process consisted of familiarisation with the transcripts, the generation of initial codes, searching for possible themes, review of possible themes, definition and naming of themes, and the production of an analytical account. The analysis was iterative rather than strictly linear: emerging interpretations were compared against the dataset to assess whether themes adequately captured both recurring patterns and divergent accounts.

The coding process focused initially on participants' descriptions of corruption and subsequently examined relationships between corrupt practices, institutional conditions and service outcomes. Particular attention was paid to both explicit accounts and underlying meanings, allowing the analysis to move beyond cataloguing incidents towards interpretation of how corruption was understood and reproduced within the water-service environment. The theoretical framework informed interpretation without being used to force participants' accounts into predetermined categories. Principal-Agent Theory sensitised the analysis to information asymmetry, discretion and monitoring, whereas Institutional Theory directed attention towards organisational norms, informal practices and the reproduction of institutional arrangements.

3.5 Trustworthiness, Reflexivity and Ethics

The methodological rigour was considered in terms of the

guidelines of credibility, transferability, dependability and confirmability (Patton, 2015) [38]. Credibility was strengthened through prolonged engagement with the interview material, iterative coding and comparison of accounts across stakeholder groups. The inclusion of public officials, civil-society actors, private providers and community representatives also provided a form of stakeholder triangulation. Transferability was facilitated by reporting participant characteristics and research context transparently, not by attempting to make a claim about statistical generalisability.

Also, reflexivity was crucial because corruption is a politically and ethically fraught issue. The researcher thus acknowledged that participants' accounts might be influenced by institutional attachments, experiences, professional interest or concerns about disclosure. Rather than treating any single account as an objective representation of institutional reality, interpretations were developed through comparison across participants and attention to both convergent and contradictory evidence.

Ethical considerations were informed consent, voluntary participation, confidentiality and the right to withdraw. Before participating in the study, participants were given information about the purpose of the study and how the data obtained in the interviews would be handled. Digital recordings and transcripts were kept secure with password protection and encryption and only accessible to the researcher. Transcripts and reporting were redacted to remove identifying information. Particular care was taken when reporting allegations of corruption to avoid unnecessary identification or defamatory attribution. The study therefore treats the interview material as situated stakeholder evidence through which perceptions and experiences of systemic corruption can be understood, rather than as documentary proof of individual wrongdoing.

4. Findings and Discussion

The thematic analysis generated four overarching empirical themes: (1) prevalence of corruption in the Nigerian water provision sector; (2) forms of corruption in the sector; (3) effects of corruption on water service delivery, water resource management, distribution and infrastructure development; and (4) factors driving corruption and stakeholder-identified control measures.

4.1 Prevalence of Corruption in Nigeria's Water Provision Sector

One noticeable aspect of the interviews was the high level of corruption recognised throughout the water supply industry. Participants 1, 12 and 17 explicitly described corruption as widespread and Participants 4, 11 and 16 linked it to the effectiveness of water provision activities and impact on vulnerable communities. Participants 1 and 17 reported that there is no doubt about the high level of corruption in the water provision sector in Nigeria, and that corruption is a great obstacle to universal access to clean water.

The consistency of these responses is analytically significant. Participants did not frame corruption simply as an occasional deviation from otherwise effective institutional processes. Rather, the accounts indicate that corruption is perceived as sufficiently widespread to influence how stakeholders understand the functioning and credibility of the sector. This finding is broadly compatible with corruption scholarship which conceptualises corruption

as capable of becoming embedded within institutional arrangements and organisational routines rather than remaining confined to individual acts (Bardhan, 2017; Castro *et al.*, 2020) ^[12, 19].

Principal-Agent Theory offers an initial explanation. There are several levels of delegation in public water provision (Fowler, 2020) ^[26] - citizens delegate decision-making power to political authorities, governments delegate services to water agencies, agencies delegate procurement and construction to water contractors, and senior management delegates operational power to frontline service providers. Each delegation creates opportunities for information asymmetry and opportunistic behaviour. Where principals cannot adequately observe or sanction agents, the latter may pursue private interests at the expense of public objectives (Bosse and Phillips, 2016; Bergh *et al.*, 2019) ^[16, 13].

Yet the findings also expose a limitation of explaining the Nigerian situation exclusively through an agency framework. If corruption were merely the result of isolated agents exploiting information advantages, stronger individual monitoring might plausibly resolve much of the problem. Participants' repeated references to weak institutions, political influence, cultural acceptance and regulatory capture suggest something more deeply embedded. Institutional Theory is therefore necessary to explain why corrupt behaviour may persist even where formal rules against it exist. Participants 10 and 15, for example, explicitly associated corruption with societal norms that condone or even reward corrupt behaviour.

The significance of this finding is heightened by its shift from corruption as an individual choice to corruption as an institutionalised practice. Scott (2013) ^[40] suggests that the institutions include regulative, normative and cultural-cognitive components. As a result, formal anti-corruption laws can exist side by side with informal norms which foster 'accommodation' or 'silence' and favour-seeking. Therefore, the Nigerian water sector should not be seen as only being characterized by a lack of rules, it is the interplay between formal institutional arrangements and informal practices whereby actors maneuver around them that is problematic.

4.2 Forms and Mechanisms of Corruption

The second theme indicated that there is a lot of variance on the perception of corruption from one form to another. The following issues were noted by participants as forms of misappropriation: procurement kickbacks, fraudulent water-quality testing, embezzlement of maintenance resources, diversion of water supplies, nepotism, corrupt licensing, bureaucratic bribery, regulatory conflict of interest, and black-market activity. Thus, the findings imply that corruption is not only financial, but also operational in nature. Participant 2 mentioned another example of corruption: misappropriation of funds, and Participant 6 mentioned supplier kickbacks that may cause materials and equipment to become more expensive. Participant 5 directly connected the issue of embezzlement of maintenance resources with the issue of poor infrastructure.

These findings support the broader argument that corruption in infrastructure sectors can reduce the developmental value of public expenditure (Adekunle and Olusa, 2021) ^[3]. However, the evidence suggests that the consequences are not simply financial. When procurement decisions favour connected rather than technically qualified contractors, as reported by Participant 3, the integrity of infrastructure

delivery may be compromised. Similarly, Participant 8's observation that corruption in licensing can permit unqualified individuals or companies to operate water facilities suggests that corruption may undermine regulatory functions designed to protect service quality.

The Principal-Agent framework is again useful because these practices involve agents exploiting delegated authority for private benefit. Procurement officers may possess information that contractors or citizens cannot readily observe; regulators may exercise discretionary licensing authority; and frontline officials may control access to services. Information asymmetry therefore creates opportunities for rent extraction (Bergh *et al.*, 2019) ^[13]. Nevertheless, the empirical evidence also points towards a more complex problem of institutional interdependence. Procurement corruption, regulatory weakness and frontline bribery are not necessarily independent phenomena. A compromised procurement process can produce poor infrastructure; poor infrastructure can generate service shortages; shortages can increase dependence on informal providers; and scarcity can create additional opportunities for rent extraction. Corruption may therefore operate as a chain of mutually reinforcing practices rather than a collection of disconnected offences.

4.3 Effects on Water Service Delivery, Infrastructure and Resource Management

The third theme offers the most compelling findings on the link between corruption and water-sector results. The participants linked low standards of maintenance and underinvestment, project delays and cost overruns, poor construction, poor service reliability, freshwater depletion, ecosystem degradation, unequal distribution and loss of public trust to corruption.

Participants 7, 10 and 14 particularly linked corruption with the degradation of infrastructure and poor water utilities. Participant 10 explained that corruption in infrastructure results in delays, cost overruns, and poor infrastructure building; and Participant 14 explained that embezzlement or use of improvement funds causes deterioration of systems. The experiences shared in these accounts align with Abubakar (2016) ^[2] who carried out an analysis of the quality of public water services in Abuja, and Chukwuma (2018) ^[20], who discussed the endemic challenges of water provision in Nigeria.

However, a critical reading requires caution against treating every infrastructure failure as evidence of corruption. Nigeria's water challenges are also shaped by inadequate investment, ageing infrastructure, institutional capacity constraints, population growth and broader water-management challenges (Cosgrove & Loucks, 2015; Ibrahim *et al.*, 2022) ^[21, 28]. The interview data cannot independently establish the causal magnitude of corruption relative to these factors. What they demonstrate is that stakeholders perceive corruption as an important mechanism through which existing resource and infrastructure constraints are intensified.

The environmental aspect of the results turns out to be especially significant. Participant 2 linked corruption to resource misallocation, Participant 16 linked it to degradation of the ecosystem and biodiversity loss, when decisions are taken based on short-term gains rather than sustainability. This broadens the discussion on corruption and service delivery from the narrow context of service

delivery quality to a wider discussion. One of the possible side-effects of corruption is that it is not only who uses the water are affected, but also how water resources are governed and conserved.

This finding is consistent with the existing literature that has been associated with governance quality and sustainable water management (Cosgrove & Loucks, 2015; Zhang *et al.*, 2020; Ahmad, 2025) ^[21, 46, 5]. It also underscores the need to go beyond simple infrastructure expansion for SDG 6. Where decisions concerning extraction, distribution and infrastructure development are vulnerable to private interests, increased investment may fail to translate into sustainable access.

4.4 Social Inequality, Vulnerability and Distrust

One of the most salient aspects of the results is the distributional effects of corruption. Participants 3, 12 and 18 identified the following groups as being disproportionately affected by the lack of resources: marginalised and vulnerable groups. Another participant (13) suggested that more money would be spent on wealthy areas than spent on less wealthy areas.

This finding introduces an important equity dimension into the corruption debate. Corruption does not necessarily impose identical costs on all citizens. Households with financial resources can often compensate for unreliable public services through private or alternative water sources, whereas poorer households have fewer options. Thus, corruption may transform an institutional governance failure into a socially differentiated welfare outcome.

This interpretation complements Abubakar's (2017) ^[1] work on inequalities in access to sanitation and Herrera's (2019) ^[27] argument that global water objectives must be reconciled with uneven local institutional realities. It also suggests that the consequences of corruption should be assessed not merely through the value of funds lost but through who bears the resulting costs.

The findings further identify distrust and scepticism as important consequences. Participants 15 and 17 associated corruption with declining confidence in the effectiveness and reliability of water-sector initiatives, while Participant 5 argued that corruption affects virtually every dimension of service improvement. This is significant because public trust is itself an institutional resource. If citizens see public water institutions as unreliable or corrupt, cooperation with formal institutions may be reduced, possibly leading to informal arrangement and undermining the legitimacy of institutions. Thus, low accountability levels can create a vicious circle of corruption, with corruption further undermining service quality, and lacking services further undermining trust in formal public provision, leading to increased informal provision (Reinsberg *et al.*, 2020) ^[39]. Such a cycle cannot be adequately explained by financial loss alone.

4.5 Drivers: Institutional Failure, Political Interference and Sociocultural Conditions

Participants identified several interconnected drivers of corruption. These encompassed weak transparency and accountability, poor regulatory enforcement, lack of public participation, regulatory capture, cultural acceptance, weak protection for whistle-blowers, political interference, nepotism, lack of ethical leadership, low remuneration and weaknesses in procurement and inadequate investment.

The findings therefore complicate explanations that attribute corruption principally to individual morality. Participant 5 associated low salaries with incentives to supplement income through corrupt practices, while Participants 2 and 4 identified political interference, influence peddling, nepotism and favouritism. Such evidence supports an incentive-based interpretation but also indicates that material incentives operate within political structures.

The relationship between political interference and corruption is particularly important. If appointments and contracts are influenced by political connections, organisational actors may face competing principals: citizens as the nominal beneficiaries of public services and political patrons as the actors capable of influencing their careers or access to resources. Principal-Agent Theory alone struggles to represent this multiple-principal environment. Institutional Theory helps explain how patronage and informal political expectations can become embedded within formal organisations (Scott, 2013) ^[40].

Similarly, Participant 16's observation that inadequate whistleblower protection creates fear and a culture of silence indicates that institutional weakness can suppress the information necessary for effective monitoring. This directly reinforces the information-asymmetry problem identified by Principal-Agent Theory.

4.6 Control Measures and the Prospects for Reform

The final empirical theme concerned proposed control measures. The participants came up with four main areas: increased transparency and accountability; legal and institutional reform; empowerment of civil society and stakeholder participation; and capacity development and trainings. Participants requested frequent audits, transparency of reporting, information being made public, access to information, and public awareness. Others suggested the establishment of independent anti-corruption bodies, more severe punishments, prosecution and ethics rules.

Protection for whistleblowers, and civil society involvement were also seen as key areas and suggested as further protection measures were e-governance and ethics training. These recommendations are basically 'logical' in theory. Open contracting and digital procurement can mitigate information asymmetry through increased transparency of contracting processes, independent oversight can improve monitoring, whistleblower protection can enhance the amount and quality of information from inside contracting organisations and civil society involvement can enhance citizen monitoring capacity (Mutangili, 2024; Kontogeorgis, 2025) ^[35, 31].

However, the results are not optimistic about the technology or the procedures. Digital systems can not necessarily prevent corruption if the institutions tasked with enforcing rules are still politically corrupt (Forghani *et al.*, 2024) ^[25]. Similarly, establishing another anti-corruption agency will have only a limited impact if it fails to avoid jurisdictional fragmentation, lacks adequate funding or is hindered by political interference in the anti-corruption process (Davis *et al.*, 2021) ^[22]. The important question here is not just whether there are transparency mechanisms, but whether information is linked to credible sanctions and institutional action.

The results corroborate a two-way interaction in systemic

corruption, between agency problems and institutional weaknesses. The Principal-Agent Theory provides an explanation on how discretion and information asymmetry lead to opportunities for rent-seeking, while the Institutional Theory provides an explanation on how political, cultural and organisational conditions make such practices commonplace. The experience therefore shows that corruption in water provision should be considered not just as a moral failing of the individual provider, but not just as a failings of the water provision system. It is a product of the interaction of incentives, power, weak monitoring, informal norms and limited accountability.

The underlying message is then that enhancing water provision goes beyond simply increasing investment. If there are no opportunities for decisions to be made public, no way to limit discretionary power, a way for those who blow the whistle to be protected, and a mechanism for meaningful consequences for misconduct, additional resources could still be diverted or misused. On the other hand, governance reform should be linked to visible improvements in infrastructure, resource management and service delivery for it to regain public trust. The problem is not just the control of corruption, but rather a change in institutional conditions where corruption can self-reproduce.

5. Policy Implications

The findings indicate that addressing corruption in Nigeria's water provision sector requires a multidimensional approach extending beyond punitive measures. First, transparency and accountability mechanisms should be strengthened through regular independent audits, transparent procurement procedures, accessible reporting of water-sector expenditure and stronger public oversight. This directly responds to participants' concerns regarding misappropriation, procurement malpractice and weak accountability.

Second, institutional and regulatory reforms are needed to decrease political interference, nepotism, regulatory weaknesses and conflicts of interest. Water-sector institutions must ensure greater separation between their operational functions and oversight responsibilities; senior positions and procurement processes should be based on transparent and meritocratic processes. But any institutional change without political will to enforce is not likely to make any difference.

Third, guidelines on whistleblowing and a safe reporting process should be reinforced. Participants linked lack of protection to fear and organisational silence. Having paths to confide in, protection from retaliation, and credible investigation could be a way to improve the chance that misconduct will be reported and addressed.

Fourthly, the results provide a strong basis for increased civil-society/community engagement in water governance. Community representatives and civil-society organisations should have meaningful opportunities to monitor projects, report service failures and to question public expenditure. This involvement may help decrease the information gap between the institutions and the service users, but without accountability systems that mandate that authorities take action on documented concerns, the value of the participation will be limited.

Finally, there should be a complementary capacity building and ethics training program in addition to structural reforms. Training should cover procurement integrity, professional ethics, responsibility and the proper management of

resources. However, training cannot be seen as a replacement for institutional enforcement. Overall, effective reform should involve transparency, independent oversight, protected reporting, stakeholder engagement and institutional capacity to help tackle the opportunities and institutional conditions in which corrupt practices thrive.

6. Conclusion

This study investigated stakeholders' perceptions of systemic corruption and its implications in water provision in Nigeria. The results suggest that corruption is seen as an all-pervading sectoral issue that manifests in several forms such as misappropriation, procurement malpractices, bribery, nepotism, weaknesses in regulation and other administrative malpractices. These activities were also linked by participants to poor infrastructure, inadequate water facilities, poor resource management, social inequalities, environmental issues and public loss of faith in water services.

The Principal-Agent Theory provides insights into how information asymmetry and discretion and weak monitoring create opportunities for opportunistic behaviour, and the Institutional Theory adds clarity to how political, organisational and sociocultural contexts can normalise and reproduce opportunistic behaviour. The results therefore indicate that corruption does not necessarily mean a failure of individuals or a failure of the institutions alone, but the failure of the two working together.

Policy responses need to extend beyond adhoc punitive actions to a more systematic approach to accountability, one that is more transparent, more regulatory, more robust, more protective of whistleblowers, more participatory, more capacity building. However, due to the purposive sampling and reliance on stakeholder accounts, the results should be viewed as qualitative evidence of perceived relationships, not as statistically generalisable causal effects. Future studies should integrate the views of stakeholders with procurement records, infrastructure evaluation and service delivery data to explore the extent to which corruption impacts the water sector in Nigeria and the ways in which it does.

7. References

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