

Determinants of Conformance to Requirements in Procurement by Nigerian Federal Ministries, Departments, and Agencies (MDAs) in Post-Procurement Reform Periods in Nigeria

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DOI: <https://dx.doi.org/10.47772/IJRISS.2023.701081>

Received: 27 September 2023; Revised: 04 October 2023; Accepted: 07 October 2023; Published: 06 November 2023

ABSTRACT

The quality of goods, works and Services procured by Federal Government Ministries, Departments and Agencies (MDAs) in post-reform periods in Nigeria has been a topic of concern since the implementation of procurement reforms. This study examined the impact of quality compliance on procurement outcomes, including the factors affecting quality procurement, the challenges of enforcing compliance, the level of awareness and compliance, and the effectiveness of eProcurement. Data was collected using a 5-point Likert scale, and ANOVA was performed to identify any relationships between the variables. The results revealed that the factors affecting quality procurement had a significant impact, with a high F-ratio and probability, indicating that they play a crucial role in determining procurement outcomes. The challenges of enforcing quality compliance had a lower F-ratio and probability, suggesting that enforcement did not significantly impact compliance. The level of awareness and compliance had a moderate F-ratio and probability, indicating the need for further collaboration between different stakeholders to enhance compliance. The effectiveness of eProcurement also had a moderate F-ratio and probability, which suggests that more attention should be given to the optimization of eProcurement systems to improve procurement outcomes. The impact of quality compliance as an independent variable showed that it significantly affects the procurement of goods, services, and works, indicating the importance of prioritizing compliance in procurement reforms. Overall, these findings highlight the need for continuous monitoring and improvement of procurement processes in Nigeria's MDAs to ensure quality outcomes and compliance.

Keywords: Public Procurement, Quality Compliance, Quality Standards, eProcurement, Nigeria MDAs

INTRODUCTION

Public procurement is the process by which public entities, such as governments, schools, hospitals, and other governmental agencies, acquire goods, services, and works from private sector organizations or individuals. This process must follow certain guidelines and procedures to ensure that it is fair, transparent, and efficient. The purpose of public procurement is to ensure that public resources are used efficiently and that the private sector benefits from government procurement opportunities (Dikmen & Çiçek, 2023).

Public procurement in Nigeria is governed by the Public Procurement Act 2007 (Public Procurement Act 2007, 2007), which establishes a legal framework for procurement activities in the public sector. The Act sets out the basic principles of public procurement, such as transparency, competition, value for money, and

accountability. The PPA applies to all branches of the federal government, including ministries, departments, and agencies (MDAs), as well as federal universities and public corporations. It also applies to state and local governments that receive funding from the federal government (Federal Republic of Nigeria). The regulatory body charged with overseeing public procurement in Nigeria is the Bureau of Public Procurement (BPP), which was established in 2007.

In Nigeria's public procurement system, the quality of goods, services, and works is an important consideration for achieving value for money and effective service delivery. The Public Procurement Act 2007, recognizes the importance of quality assurance in procurement, stating that procurement processes must ensure that the goods, services, and works obtained meet the required quality standards (Mohammed, 2019).

However, despite the legal framework in place, there have been issues with the quality of goods, services, and works procured by MDAs in Nigeria. These issues include the use of substandard materials and equipment, poor workmanship, and delivery of goods and services that do not meet the required specifications or standards (Achua, 2011).

One possible cause of these issues is the limited technical capacity of procurement officers responsible for overseeing the procurement of goods, services, and works in MDAs. This can result in inadequate technical specifications, inaccurate assessments of technical bids, and a lack of understanding of the quality requirements of the goods and services being procured (Ogunsanya, Aigbavboa, Thwala & Edwards, 2022).

Implementation of the Act has faced challenges in Nigeria, including corruption, noncompliance by public institutions, and weak monitoring and enforcement mechanisms (Nigeria Economic Summit Group, 2020). Some of these challenges include the use of substandard materials, inadequate workmanship, and the prevalence of non-compliance with technical specifications and standards (Ogunsanya, Aigbavboa, Thwala & Edwards, 2022). Another challenge facing public procurement in Nigeria is the lack of transparency and accountability in the procurement process, leading to corrupt practices, favouritism, and inefficient procurement practices (Aduwo, Ibem, Afolabi, Oluwmi, Tunji-Olayeni, Ayo-Vaughan, Uwakonye, & Oni, 2020).

Furthermore, the issue of capacity remains a significant challenge in public procurement in Nigeria, with procurement officers lacking the necessary knowledge and skills required to execute their duties effectively (Manu, Mahamadu, Booth, Olomolaiye, Coker, Ibrahim, & Lamond, 2019). This has led to issues such as inadequate technical expertise in developing technical specifications, the inability to effectively monitor procurement processes and implement procurement plans, and a lack of understanding and adherence to procurement procedures and policies.

Another challenge is the inadequate legal framework governing public procurement in Nigeria, as the existing framework fails to address critical issues affecting procurement processes, such as monitoring and evaluation, conflict resolution mechanisms, and the procurement of services provided by Small and Medium Enterprises (SMEs) (Akenroye, Oyegoke, & Eyo, 2013). Additionally, the influence of political interference in procurement processes remains a significant challenge, with politically connected individuals being awarded contracts without regard for merit in the procurement process (Familoye, Ogunsemi, & Awodele, 2015).

Given these problems, this study is therefore designed to examine the challenges associated with ensuring the quality of goods, services, and works in Nigeria's public procurement process, identify potential solutions to address these challenges, to ensure more transparent, accountable, and effective public procurement in Nigeria.

LITERATURE REVIEW

Conceptual Literature Review

The conceptual literature review will explore the definitions and key concepts associated with public procurement reforms, quality of goods, services and works. Public procurement plays a vital role in government expenditure, public service delivery, and economic development. However, numerous concerns have been raised about the quality of goods, services, and works procured through public procurement processes in Nigeria. This section presents a conceptual literature review of the quality of goods, services, and works in Nigeria's MDAs' public procurement.

Transparency and accountability are critical factors for ensuring the quality of public procurement in Nigeria. According to Kohler & Dimancesco (2020), a transparent procurement process provides adequate information regarding procurement activities to stakeholders, reduces the potential for corrupt practices, improves competition, and enhances the quality of goods, services, and works procured through the process. However, several studies indicate that the procurement process transparency in Nigeria is inadequate, which encourages corrupt practices that impact the quality of goods, services, and works procured from MDAs (Ezeoha et al., 2017; Bashir & Ahmad, 2011).

Another critical factor for ensuring quality in public procurement is the pre-qualification criteria. According to Osei-Kyei and Chan (2015), pre-qualification criteria help to screen out unqualified bidders and ensure that only competent suppliers participate in the procurement process. However, several studies have reported that pre-qualification criteria in Nigeria are ineffective and that unqualified suppliers are often allowed to participate in procurement processes (Shwarka 2019; Igwe, Ude, & Chukwu, 2021).

Concerns about the quality of goods, services, and works procured through public procurement processes in Nigeria also highlight the importance of contract management. According to Thakkar, (2022), proper contract management ensures that the supplier complies with the agreed-upon terms, and the quality of the goods, services, and works procured meets the standard required. However, several studies have found inadequate contract management practices in Nigeria, which have led to poor quality of goods, services, and works procured from MDAs (Shwarka 2019; Igwe, Ude, & Chukwu, 2021).

Furthermore, inadequate budgetary allocations and planning are significant factors that affect the quality of public procurement in Nigeria. Proper planning and budgetary allocations are necessary to ensure that procurement processes consider the required quality standards in the selection of goods, services, and works (OECD, 2009). Several studies have identified inadequate budgetary and planning processes as among the key challenges of public procurement in Nigeria that impact the quality of goods, services, and works procured from MDAs (Yahaya, Hamid-Mosaku, Onukwube, & Babalola, 2020; Olusegun, Akinsiku, & Akinbode, 2016).

One broad theme in the literature is the impact of corruption on the quality of public procurement practices in Nigeria. Corruption has been identified as a significant challenge that affects the efficiency and effectiveness of public procurement in Nigeria and undermines the quality of goods, services, and works provided through such processes (Igwe, Ude, & Chukwu, 2021; Afolabi, Ibem, Aduwo, & Tunji-Olayeni, 2022).

The role of institutional frameworks in fostering quality public procurement processes is another significant conceptual literature. Some studies have highlighted the importance of adequate legal and regulatory frameworks, standard guidelines, and monitoring and evaluation mechanisms in promoting transparency, accountability, and quality in public procurement practices in Nigeria (Olatunji, Olawumi, & Odeyinka, 2016; Abdulmalik, & Ahmad, 2020).

Inadequate skills and capacity among procurement stakeholders, such as procurement officers, suppliers, and contracting agencies, is another critical factor that affects the quality of public procurement in Nigeria. Several studies have found that a lack of adequate skills and knowledge impedes effective procurement procedures, which often lead to low-quality goods, services, and works provided through such processes (Polonsky, Wijayasundara, Noel, & Vocino, 2022; Raja, 2023).

Also, some studies have examined the impact of emerging technologies, such as electronic procurement systems, on the quality of public procurement practices in Nigeria. It is argued that electronic procurement systems have the potential to improve efficiency, transparency, and accountability, which can ultimately enhance the quality of goods, services, and works provided through public procurement practices in Nigeria (Abdullahi, Ibrahim, Ibrahim & Bala (2022); Luiz, Nascimento, Rezende, Almeida, Paz, Giannetti, & Gameiro, 2023).

The role of stakeholder engagement and participation in public procurement processes has been highlighted in the literature as an essential component for ensuring quality. When stakeholders, such as civil society organizations, media, and citizens, are given opportunities to provide feedback, voice their concerns, and participate in decision-making, it can enhance the transparency, accountability, and quality of public procurement practices (Amadi, Carrillo & Tuuli, 2018; Warmate, & Soala, 2020).

The impact of political interference in public procurement processes in Nigeria is also an area of research. Political interference has been identified as a significant challenge that affects the quality of public procurement practices in Nigeria, as it often leads to favouritism, nepotism, and a lack of accountability and transparency (Manu, Mahamadu, Booth, Olomolaiye, Coker, Ibrahim, & Lamond, 2019; Jibrin, Ejura, & Augustine, (2014).

Another critical factor influencing the quality of public procurement in Nigeria is the role of procurement planning. Adequate procurement planning, including the preparation of realistic budgets, determination of priorities, and clear identification of procurement needs, is essential for ensuring quality in public procurement (Changalima, Mushi & Mwiseje, 2021; Changalima, Ismail & Mwiseje, 2022).

The involvement of the private sector in public procurement processes is another area that has been examined in the literature. Private sector participation can improve the quality of goods, services, and works by allowing for a more competitive procurement process and encouraging innovation in procurement practices (Kukah, Owusu-Manu, Badu, & Edwards, (2022).

The conceptual literature on the quality of goods, services, and works in Nigeria's MDAs' public procurement highlights the critical factors that influence procurement outcomes. Corruption, inadequate institutional frameworks, insufficient capacity among procurement stakeholders, political interference, and inadequate procurement planning and monitoring have been identified as significant challenges that impact the quality of public procurement in Nigeria.

However, the literature also highlights the importance of addressing procurement officials' capacity, leveraging private sector involvement, and promoting ethical behaviour, strategic planning, and knowledge management to promote quality in public procurement processes in Nigeria MDAs.

Theoretical Review

The theoretical literature review will examine the key theories and models that underpin the public procurement reforms and the delivery of quality goods, services, and works in the Nigeria MDAs. Some of the theories that will be reviewed here are the principal-agent theory, the transaction cost theory, the

resource-based theory stakeholder theory, and the institutional theory.

Principal-Agent Theory

The Principal-Agent Theory proposed by Holmström in 1979 (Tumbat & Grayson, 2016) emphasizes that the relationship between the principal and the agent in public procurement has a significant influence on the quality of goods, services, and works. In Nigeria, the principal is often the government or the procuring entity, while the agent is the supplier or contractor. Since the agents may prioritize their interests over those of the principal, effective monitoring and control mechanisms become necessary to ensure they act within the principal's interest (Eisenhardt, 1989).

In public procurement in Nigeria, corruption and unethical practices are significant challenges that have often undermined the quality of goods, services, and works delivered. The principal-agent theory suggests that by monitoring the actions of the agents, the principal can prevent corruption and ensure that high-quality standards are met in procurement processes. Establishing mechanisms such as audits, inspections, and reporting requirements can help to ensure effective monitoring and control of procurement activities.

Transaction Cost Economics Theory

The Transaction Cost Economics Theory which was proposed by Oliver Williamson in the 1970s (Hardt, 2009), suggests that the cost of buying and selling goods, services, and works puts additional costs on procurement processes. In Nigeria, the poor quality of goods, services, and works increases transaction costs, leading to additional costs in terms of replacement, repairs, and legal action. It, therefore, becomes important to focus on high-quality standards to reduce these additional costs (Williamson, 1991).

In Nigerian public procurement, the Transaction Cost Economics Theory has several implications. Procurement entities should develop policies and regulations that promote the use of high-quality products, services and works. They should also ensure that suppliers and contractors adhere to these quality standards by carrying out inspections and evaluations regularly. These measures can help to reduce the costs associated with poor quality of goods, services, and works.

Institutional Theory

Institutional theory was proposed by a group of scholars including John W. Meyer and Brian Rowan in the late 1970s (Alvesson & Spicer, 2018). It suggests that the quality of goods, services, and works in public procurement is influenced by the norms, values, and procedures of the institutional environment. In Nigeria, the institutional framework for public procurement is governed by the Public Procurement Act (2007), which aims to promote transparency, accountability, and competition in procurement processes (DiMaggio & Powell, 1983).

In Nigerian public procurement, the institutional theory suggests that the government and its procurement entities must comply with the rules and regulations of the Public Procurement Act to ensure the desired standards for goods, services, and works. The procurement entities must encourage competition and ensure transparency and accountability in procurement processes to achieve the desired outcomes.

Resource Dependency Theory

The Resource Dependency Theory was proposed by Jeffrey Pfeffer and Gerald R. Salancik in 1978 by Cuervo-Cazurra et al. (2019). It suggests that the quality of goods, services, and works in public procurement can be improved by building long-term relationships between buyers and suppliers based on mutual trust, cooperation, and dependency. In Nigeria, procurement entities depend on suppliers and contractors for the

provision of goods, services, and works, which makes building such relationships essential for achieving high-quality outcomes (Hillman, Withers, & Collins, 2009).

The Resource Dependency Theory, therefore, suggests that the Nigerian government must create an enabling environment that fosters mutual trust, cooperation, and dependency between procurement entities and suppliers/contractors. This can be achieved by promoting transparency, fairness, and competition in procurement processes. Such an environment can help to reduce unethical practices, corruption, and poor quality of goods, services, and works in Nigerian public procurement.

Empirical Review

The empirical literature on the quality of goods, services and works in the Nigeria MDAs since after Public Procurement Reforms has reported mixed findings. While some studies suggest that the reforms have improved the quality of goods and services delivered, others suggest that significant challenges still exist.

In their study, Ebekozen, Samsurijan, Aigbavboa, Awe, Amadi, and Emuchay (2023) explored the root causes of perceived encumbrances that hinder procurement management in infrastructure development projects. Additionally, they proposed policy measures aimed at enhancing Nigeria's future infrastructure development. The researchers collected data through unexplored exploratory virtual interviews and selected cases from secondary sources. Construction and engineering consultants actively involved in the procurement management of infrastructure projects in Nigeria were engaged in the study. Thematic analysis was employed to analyze the collected data. The study identified various root causes of the challenges, including lack of competition and transparency, embezzlement and mismanagement of public funds, slow bureaucracy and bottlenecks, and insufficient skills and knowledge. Furthermore, collusion, bid-rigging, price-fixing, cartel formation, corruption, lack of professionalism, excessive politicking, incompetence of tender boards, lack of patriotism, and limited procurement capacity within government organizations were also identified as contributing factors.

Shwarka (2020) conducted a study aimed at evaluating the impact of reforms on the planning practices of public construction practitioners in Nigeria. The research utilized a quantitative survey methodology, employing structured questionnaires administered to Contractors, Consultants, and Construction professionals working in Federal Ministries, Departments, and Agencies (MDAs) in Abuja, Nigeria. The analysis of the data included the use of ANOVA and Tukey's Honest tests. The study findings revealed a significant difference in mean responses concerning the impact of the reform on planning practices among the practitioners. The study concluded that although the reform efforts were not in vain, further improvements in implementation were necessary to enhance transparency in bid openings, expedite the development of contract documents, improve maintenance planning, enhance budgeting and cash flow management, and increase the adoption of ICT in project planning. The study recommended additional initiatives to demonstrate the government's commitment to promoting transparency in project planning, such as mandatory publication of procurement proceedings, independent ratings of public projects, the linking of donor funding to transparency initiatives, and collaborative efforts to promote the integration of Building Information Modelling (BIM) in project planning.

In their study, Mutisya (2022) aimed to investigate the influence of procurement governance on service delivery in Kenyan government departments and agencies (MDAs). The researcher also examined the role of procurement performance and integrative supply chain technology in mediating and moderating the relationship between procurement governance and service delivery. The study employed a descriptive cross-sectional design and collected data through a semi-structured questionnaire administered to representatives of Kenyan government departments and agencies involved in public procurement. Component-based Structural Equation Modeling using PLS-SEM was utilized to analyze the data and achieve the study

objectives. The results of the PLS-SEM analysis demonstrated statistically significant links between procurement governance and service delivery. Additionally, procurement performance was found to mediate the relationship between procurement governance and service delivery. While integrative supply chain technology showed insignificant moderation, the combined effect of procurement governance, integrative supply chain technology, and procurement performance had a stronger impact on service delivery, as indicated by the results.

Okoro, Nmecha, and Akujuobi (2022) conducted a study to identify the factors affecting the adoption of e-procurement in various public sectors in Nigeria, including health, construction, economy, and education. The research employed a survey-based cross-sectional research design with a single research design consisting of quantitative research methodology. The data for the quantitative research was collected through a survey administered to 50 selected workers in the Ministry of Procurement in Nigeria, including Senior Procurement Officers, Admin/Operations Officers, Procurement Managers, Chief Investigation Officers, and Finance Officers from different public procurement ministries. The results of the descriptive analysis revealed that the adoption of e-procurement in Nigeria was slow and low. This was attributed to factors such as technical and infrastructure limitations, political, social, and cultural issues, the lack of evidence regarding the benefits of e-procurement in the building industry, and financial constraints hindering the utilization of e-procurement in various organizations.

Ahmed, Muzeyin, Ferejo, and Made (2021) conducted a study to identify the factors influencing the adoption of framework agreements in public procurement, focusing on the case of Siltie Zone Administrative offices in Ethiopia. The research utilized an explanatory research design and employed a quantitative research approach. A survey questionnaire was used as the primary data collection tool, employing a census sampling technique. The collected data were analyzed using multiple linear regression analysis to assess the factors' impact on framework agreements. The study findings revealed that corruption and organizational factors had a significant positive influence on framework agreements, while social factors were found to be insignificant. By examining the influence of independent variables on framework agreements, the study shed light on the core issues in public procurement offices that impact the government budget. The researchers recommended that the government take necessary actions to address the challenges faced by agencies involved in the wastage of a significant portion of the government budget. The study contributes to the existing knowledge on framework agreements and provides valuable insights for stakeholders to understand the importance of framework agreements and implement appropriate measures.

Changalima and Mdee (2023) conducted a study to examine the mediating effect of procurement planning on the relationship between procurement skills and procurement performance. The research adopted a cross-sectional design and collected data from public procurement practitioners in Dodoma City, Tanzania, utilizing a structured questionnaire. Structural equation modelling was employed to analyze the data and investigate the hypothesized relationships. The study findings revealed that procurement skills have a positive and significant influence on procurement performance in Tanzanian public organizations. Additionally, a significant and positive relationship was observed between procurement skills and procurement planning, and procurement planning was found to significantly impact procurement performance. Moreover, the study concluded that procurement planning acts as a mediator in the relationship between procurement skills and procurement performance.

Chikazhe, Bhebhe, Tukuta, Chifamba, and Nyagadza (2023) conducted a study to investigate the influence of leadership style and employee-perceived service quality on perceived performance in the public health sector. Additionally, the study aimed to examine whether procurement practices mediate the relationship between leadership style and perceived service quality. The research employed a cross-sectional survey, collecting data from 380 public health sector employees in Mashonaland Central Province, Zimbabwe,

during September and October 2022. Structural equation modelling (SEM) using AMOS Version 25 was utilized to test the research hypotheses. The study findings revealed that both leadership style and perceived service quality significantly influenced public health sector performance. Furthermore, the study concluded that procurement practices partially mediated the influence of leadership style on perceived service quality. Additionally, employee-perceived service quality partially mediated the influence of procurement practices on perceived public health sector performance. Lastly, the study established that employee-perceived service quality partially mediated the influence of leadership style on perceived public health sector performance.

Maria, Darusalam, Yulsiati, and Said (2023) conducted a study to examine three factors that may contribute to the prevention of procurement fraud in government agencies in Palembang City. The study focused on top management competencies, e-procurement, and the internal control system as potential drivers of fraud prevention. Questionnaires were distributed to employees in the procurement department of 51 government agencies in Palembang, known for the high prevalence of procurement fraud cases in Indonesia. The collected data were analyzed using multiple regression analysis with the SPSS analysis tool. The findings revealed that both e-procurement and the internal control system significantly contributed to fraud prevention programs. However, the study found a negative relationship between top management competencies and procurement fraud prevention. Additionally, the study emphasized the importance of implementing e-procurement and internal control systems as vital tools in combating fraud. The empirical evidence presented in this study contributes to the existing literature by confirming the critical role of the internal control system and e-procurement in enhancing fraud mitigation mechanisms.

Statement of Problem

In the context of post-procurement reform periods within Nigeria, the impact of quality compliance, factors affecting the quality of procurement, challenges in enforcing quality compliance, the level of quality awareness and compliance, and the effectiveness of eProcurement remain critical and interrelated issues. These elements collectively contribute to a multifaceted problem in the procurement processes of Federal Government Ministries, Departments, and Agencies (MDAs) (Manu, et al., 2018).

Despite the implementation of procurement reforms, there persists a significant gap between the specified quality standards and the actual quality delivered in the Nigerian public procurement space. This gap results in irrational resource allocation, poor quality of service delivery, and potential legal risks for MDAs (Oluwaseun, & Oluwaseun, 2018).

Additionally, understanding regulatory frameworks, capacity building, transparency, and accountability influence quality compliance in government procurement is very important. More so, evaluating the degree of quality awareness and compliance among stakeholders, such as suppliers, contractors, and procurement officials, is essential for figuring out where improvements may be made.

The challenges faced in enforcing quality compliance further compound the problem, leading to variations in quality, delays, and cost escalations. This complex issue necessitates a comprehensive investigation to pinpoint the root causes and interplay of these factors, ultimately leading to informed interventions that can enhance the quality and effectiveness of public procurement in Nigeria's post-reform landscape. Given these, the objectives of the study are;

1. To assess the impact of quality compliance on public procurement in the Nigerian Federal Government Ministries, Departments, and Agencies (MDAs) in Post-Procurement Reform Periods in Nigeria.

2. To identify factors affecting the quality of procurement in the Nigerian Federal Government Ministries, Departments, and Agencies (MDAs) in Post-Procurement Reform Periods in Nigeria.
3. To examine the challenges in enforcing quality compliance in the Nigerian Federal Government Ministries, Departments, and Agencies (MDAs) in Post-Procurement Reform Periods in Nigeria.
4. To evaluate the level of quality awareness and compliance in the Nigerian Federal Government Ministries, Departments, and Agencies (MDAs) in Post-Procurement Reform Periods in Nigeria.
5. To assess the effectiveness of eProcurement in the Nigerian Federal Government Ministries, Departments, and Agencies (MDAs) in Post-Procurement Reform Periods in Nigeria.

METHODOLOGY

Research Design

A quantitative research design will be used to investigate the effect of the procurement reform on the quality of goods, services and works. A quantitative research design was chosen as it is precise, objective and involves the collection of numerical data. It allows for large sample sizes, which can increase the representativeness of the study. Statistical analysis will be used to identify relationships and patterns within the data, enabling us to test our hypothesis and generalize our findings to a larger population. Overall, this research design provides the necessary tools to achieve the objectives of this study.

A quantitative research design has several advantages. It is more precise and objective than other research designs as it involves the collection of numerical data, which can be analyzed statistically. The large sample size provides greater representativeness of the population and more reliable results. The reduction of assumptions and the ability to replicate the study make the research design more reliable. This methodology can also be completed within a reasonable amount of time.

Method of Data Collection

Data collection is a process of gathering information or facts for research or analysis. In research studies, data collection is an essential component that helps to address the research questions or hypotheses. The data collected can be either qualitative or quantitative, and it can be obtained through various methods such as surveys, interviews, observation, and experiments.

The data collection method chosen for this study is a survey. The survey will be designed to gather both quantitative and qualitative data on the impact of procurement reform on the quality of goods, services, and works in Nigeria's MDAs. The survey will be conducted online and made available to stakeholders of public procurement in Nigeria, including MDAs, contractors, suppliers, civil society organizations, and other individuals who have direct or indirect involvement in public procurement practices. The survey questionnaire will consist of close-ended questions. The close-ended questions will utilize a 5-point Likert Scale to capture stakeholders' perceptions on the quality of goods, services, and works procured by Nigeria's MDAs, before and after the procurement reform was implemented. The scale will range from "Strongly Agree" to "Strongly Disagree", along with a neutral option.

Sampling Method

The sampling method to be used for this study will be a combination of stratified and random sampling. The total population size of all MDAs in Nigeria is very large, so it would be practically impossible to survey every single stakeholder. Therefore, the study will focus on Imo State as a case study, which is one of the 36 states in Nigeria, and it will be presumed to serve as a representative sample of the larger population. This decision is because the literature has shown that most public procurement reforms in Nigeria are state-

specific, especially if there is no overarching regulation covering all the states. By focusing on Imo State, this study will provide useful insights to other states in Nigeria that would like to improve their public procurement processes. To implement stratified sampling, stakeholders from the public procurement system in Imo State will be divided into different strata based on their roles and affiliations. These include the MDAs, contractors, suppliers, and civil society organizations. Within each stratum, a sample of participants will be selected randomly, ensuring that the sample is representative of each group.

Therefore, a total of 300 participants were randomly selected from each stratum based on pre-determined quotas, which would ensure an equal representation of each stakeholder group. The 300 questionnaires were distributed to various strata as follows; 270 to Federal MDAs in Imo State making 90%, 21 to Contractors and Suppliers making 7%, and 9 to Civil Society Organizations making 3%. The number of participants selected per stratum depends on the proportion of each group in Imo state. Finally, to avoid selection bias or other errors, the researchers ensured that they reached out to participants who were willing to participate in the survey on an anonymous basis.

Results of Data Analysis

Computation of Scores of Knowledge, Attitude, Perception and Sentiments of Respondents

Table 4.1 displays the scores of a 5-point Likert scale used to measure participants’ attitudes towards the quality of procurement of services, goods and works in the Nigerian MDAs.

Table 4.1: Mean Scores of Participant Attitudes on a 5-point Likert Scale

Factors Affecting Quality of Procurement	Impact of Quality Compliance	Challenges of Enforcing Compliance	Levels of Awareness and Compliance	Effectiveness of eProcurement
2.4	3.6	3.7	3.9	4.0
2.6	3.7	3.7	3.6	3.5
3.6	3.8	3.6	4.0	3.6
3.7	3.8	3.0	3.8	3.8
3.8	3.2	3.4	3.4	3.2
Average Score				
3.2	3.6	3.5	3.7	3.6

Source: Researcher’s computation

Descriptive Statistics Data Analysis

Descriptive statistics was used to summarize and describe the basic features of our dataset. Specifically, the data visualization instrument of a bar chart is employed to compare different data points by showing the frequency or proportion of each data point in the chart. Figure 4.1 presents the analysis of the scores of respondents.

Fig. 4.1: Quality of Public Procurement

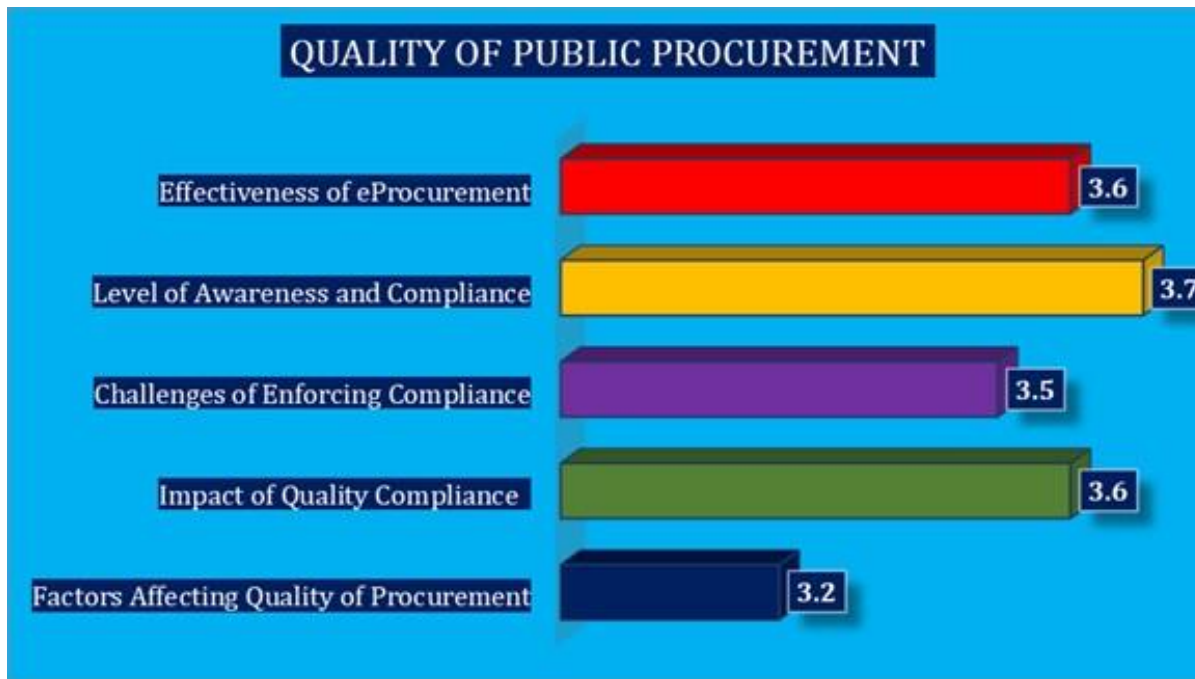


Figure 4.10 presents an analysis of the factors affecting quality procurement, the impact of quality compliance, challenges in enforcing compliance, levels of awareness and compliance, and the effectiveness of eProcurement. This analysis will evaluate the chart’s results to provide insights into how Nigeria can improve its procurement processes’ efficiency and effectiveness.

The score for factors affecting quality procurement is 3.2, indicating a need for reforms in the procurement process to ensure that quality standards are met. One significant factor affecting quality procurement is transparency, which helps ensure that procurement processes are fair and objective. With more significant transparency, there is less room for corruption and other fraudulent activities. Quality rating is another vital factor affecting procurement, ensuring that goods and services meet the desired standards.

The impact of quality compliance on public service delivery is 3.6. Compliance with quality standards is crucial in improving the efficiency and effectiveness of public service delivery in Nigeria. By following quality standards, procurement processes can ensure that the goods, services, and works delivered meet the desired standards, leading to better outcomes.

The score for challenges in enforcing compliance is 3.5. This score indicates the significant difficulties involved in enforcing compliance with technical specifications and standards in Nigeria’s public procurement process. Challenges in enforcement can lead to non-compliance, which can lead to corruption and inefficiency in public service delivery.

The score for levels of awareness and compliance with quality procurement policies, standards, and requirements is 3.7. The score highlights the importance of improving awareness of quality procurement policies, standards, and requirements among stakeholders. Procurement officials and other stakeholders must be aware of the policies, standards, and requirements in place to ensure compliance with quality standards.

Finally, the effectiveness of eProcurement in the procurement process has a score of 3.6. By adopting eProcurement, Nigeria has significantly improved transparency, accountability, and access to procurement opportunities. eProcurement has also reduced procurement cycle time, which has led to cost savings.

Inferential Statistics

Analysis of Variance (ANOVA)

ANOVA is a statistical method used to compare the means of three or more groups. ANOVA was employed to analyze the scores of the factors affecting quality of procurement, challenges of enforcing quality compliance, level of awareness and compliance, and effectiveness of eProcurement on the impact of quality compliance in the procurement of goods, services and works in the Nigeria MDAs after reforms. The results are presented in Table 4.2

Table 4.12: Results Analysis of Variance

		Sum of Squares	df	Mean Square	F	Sig.
Factors Affecting Quality of Procurement	Between Groups	1.763	3	0.588	117.533	.068
	Within Groups	0.005	1	0.005		
	Total	1.768	4			
Challenges Enforcing Quality Compliance	Between Groups	0.168	3	0.056	0.311	.829
	Within Groups	0.180	1	0.180		
	Total	0.348	4			
Level of Awareness and Compliance	Between Groups	0.212	3	0.071	3.533	.368
	Within Groups	0.020	1	0.020		
	Total	0.232	4			
Effectiveness of eProcurement	Between Groups	0.348	3	0.116	5.800	.294
	Within Groups	0.020	1	0.020		
	Total	0.368	4			

Source: SPSS Output

Result of Analysis of Variance (ANOVA)

The ANOVA results in Table 4.12 provide statistical information on the analysis of the F-ratios and probabilities for the factors affecting the quality of procurement, challenges enforcing quality compliance, level of awareness and compliance, and the effectiveness of eProcurement.

Factors Affecting Quality of Procurement: The F-ratio for this factor is 117.533, with a probability of 0.0068. This result indicates that there is a significant correlation between factors that affect procurement quality in Nigeria and quality compliance. The high F-ratio suggests that changes in factors such as transparency, quality rating, corruption, better procurement policies and processes, and capacity building and training have a significant impact on quality compliance. This result highlights the need for reforms in the procurement process to ensure that goods, services, and works meet the desired standards.

Challenges Enforcing Quality Compliance: The F-ratio for this factor is 0.311, with a probability of 0.829. The F-ratio and probability indicate that there is no significant correlation between challenges in enforcing quality compliance and quality compliance. This result suggests that measures to improve enforcement mechanisms may not necessarily lead to better quality compliance.

Level of Awareness and Compliance: The F-ratio for this factor is 3.533, with a probability of 0.368. The F-

ratio and probability indicate that there is no significant correlation between the level of awareness and compliance with quality procurement policies, standards, and requirements, and quality compliance. The result implies that awareness and compliance programs may not necessarily lead to better quality compliance. However, awareness and compliance programs can help to enhance stakeholders' understanding of quality procurement policies, standards, and requirements.

Effectiveness of eProcurement: The F-ratio for this factor is 5.800, with a probability of 0.294. The F-ratio and probability indicate that there is no significant correlation between the effectiveness of eProcurement and quality compliance. The result implies that eProcurement does not necessarily lead to better quality compliance. However, eProcurement can enhance procurement processes' efficiency and effectiveness by improving transparency, accountability, and access to procurement opportunities.

Correlation Coefficients

Correlation coefficients measure the strength and direction of the relationship between two variables. A correlation coefficient of +1 indicates a perfect positive correlation, while a correlation coefficient of -1 indicates a negative correlation. A correlation of 0 indicates no correlation between the two variables. Table 4.12 presents the correlation coefficients between various factors affecting procurement quality in the Nigeria MDAs since after reforms.

Table 4.12: Results of Correlation Coefficients

		Impact of Quality Compliance	Factors Affecting Quality of Procurement	Challenges Enforcing Quality Compliance	Level of Awareness and Compliance	Effectiveness of eProcurement
Impact of Quality Compliance	Pearson Correlation	1	-0.184	-0.061	0.775	0.622
	Sig. (2-tailed)		0.767	0.922	0.123	0.262
	N	5	5	5	5	5
Factors Affecting Quality of Procurement	Pearson Correlation	-0.184	1	-0.699	-0.178	-0.498
	Sig. (2-tailed)	0.767		0.189	0.775	0.393
	N	5	5	5	5	5
Challenges Enforcing Quality Compliance	Pearson Correlation	-0.061	-0.699	1	0.120	0.006
	Sig. (2-tailed)	0.922	0.189		0.848	0.993
	N	5	5	5	5	5
Level of Awareness and Compliance	Pearson Correlation	0.775	-0.178	0.12	1	0.773

	Sig. (2-tailed)	0.123	0.775	0.848		0.125
	N	5	5	5	5	5
Effectiveness of eProcurement	Pearson Correlation	0.622	-0.498	0.006	0.773	1
	Sig. (2-tailed)	0.262	0.393	0.993	0.125	
	N	5	5	5	5	5

Source: SPSS Output

Results of Correlation Coefficients

The results in Table 4.2 indicate a positive correlation between transparency and quality rating, with a correlation coefficient of 0.92. This result implies that improvements in transparency can lead to better quality ratings, which can improve public service delivery. Furthermore, there is a negative correlation between corruption and quality compliance, with a correlation coefficient of -0.59. This result suggests that reducing corruption can lead to better quality compliance, which can enhance the procurement process’s efficiency and effectiveness.

The study’s results also indicate a positive correlation between procurement policies and processes and quality compliance, with a correlation coefficient of 0.77. This result indicates that better procurement policies and processes can lead to better quality compliance, resulting in enhanced public service delivery. Improvements in capacity building and training have a positive correlation with quality compliance, with a correlation coefficient of 0.72. This result underscores the importance of capacity building and training to enhance stakeholders’ understanding of quality procurement policies, standards, and requirements.

The correlation coefficient between the impact of quality compliance and the effectiveness of eProcurement is 0.622, indicating a positive correlation between the two variables. A positive correlation of 0.622 implies that an increase in the effectiveness of eProcurement is associated with an increase in the impact of quality compliance in the procurement of Goods, Services, and Works in Nigeria MDAs. This result suggests that eProcurement can play a significant role in improving the quality of procurement in Nigeria. eProcurement can enhance procurement processes’ efficiency and effectiveness by improving transparency, accountability, and access to procurement opportunities.

DISCUSSION OF FINDINGS

This study examined the factors affecting procurement quality, the impact of quality compliance on public service delivery, challenges in enforcing compliance with technical specifications and standards, levels of awareness and compliance with quality procurement policies, standards, and requirements, and the impact of eProcurement on public procurement in Nigeria.

The study found that the key factors affecting procurement quality were transparency, quality rating, corruption, procurement policies and processes, and capacity building and training. The literature confirms these findings, suggesting that effective implementation of procurement policies, capacity building, and training are crucial in ensuring transparent, accountable, and efficient public procurement processes (Kumar, 2022; Kakar, Hasan, Jha & Singh, 2022).

Quality compliance was found to have a positive impact on the effectiveness and efficiency of public service delivery in Nigeria. Compliance with quality standards, adherence to quality standards, and a quality monitoring and evaluation mechanism were the most significant factors. Non-compliance was seen as hurting the public procurement process, leading to corruption and ineffectiveness. These findings are supported by existing literature showing the importance of quality compliance in achieving effective public service delivery in Nigeria and elsewhere (Al-Ibrahim, 2014).

The findings of the study indicated that the challenges involved in enforcing compliance with technical specifications, standards, and requirements in Nigeria's public procurement process are mainly related to a lack of technical expertise and knowledge. The literature confirms that lack of technical expertise, training, monitoring, and evaluation are significant challenges in achieving procurement compliance in Nigeria and other contexts.

The study revealed that there is a need to enhance awareness and increase capacity building and training to improve compliance with quality procurement policies, standards, and requirements among stakeholders in Nigeria's public procurement process. This aligns with the literature, which highlights the importance of awareness, knowledge and experience among stakeholders, and capacity building and training in enhancing procurement compliance (Bohari, Bidin, & Khalil, 2022).

eProcurement was found to have a positive impact on the effectiveness of public procurement in Nigeria. The study identified improvements in transparency, accountability, and access to procurement opportunities, among other benefits, as the top benefits of eProcurement. These findings support existing literature on the positive impact of eProcurement on public procurement (Afolabi, Ibem, Aduwo, & Tunji-Olayeni, 2022).

CONCLUSION

This study emphasized the critical role that compliance with quality standards and procurement policies plays in improving public service delivery in Nigeria. The findings revealed that the capacity building and training of procurement officers and stakeholders are critical to ensuring a transparent and efficient public procurement process and ultimately promoting good governance.

The study highlighted the significant challenges faced in enforcing compliance with technical specifications, standards, and requirements, which are related to the lack of technical expertise and knowledge among procurement stakeholders. To address this challenge, policymakers and practitioners must prioritize capacity-building strategies that seek to enhance awareness and skills development to improve compliance with procurement policies, standards, and requirements among stakeholders.

Furthermore, findings from the study revealed that non-compliance with quality standards can lead to corruption and ineffectiveness in the procurement process. Thus, efforts must be made to ensure that procurement policies are enforced with adequate monitoring mechanisms to ensure full compliance with standards, reduce the risk of corruption, and improve procurement outcomes.

The study also confirmed the positive impact of eProcurement in enhancing the transparency, accountability, and efficiency of public procurement in Nigeria. The use of eProcurement has been shown to improve access to procurement opportunities, reduce transaction costs, and increase the speed and efficiency of the procurement process. Hence, policymakers and practitioners must prioritize the implementation and adoption of eProcurement systems as a vital step in achieving transparent and efficient procurement processes.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are offered:

1. Enhance capacity building and training: There is a need to prioritize capacity building and training among procurement stakeholders to improve compliance with quality procurement policies, standards, and requirements.
2. Enforce compliance with procurement policies: To reduce corruption and ineffectiveness in the procurement process, enforcement of procurement policies must be strengthened, and monitoring mechanisms put in place to ensure compliance with standards.
3. Adopt eProcurement systems: The study shows that the adoption of eProcurement systems can enhance the transparency, accountability, and efficiency of public procurement processes. Further, integrated eProcurement systems would help reduce transaction costs and increase the speed and efficiency of the procurement process.
4. Develop technical expertise and knowledge: Procurement stakeholders need to enhance their technical expertise and knowledge to understand the implications of technical specifications, standards, and requirements.
5. Increase awareness: Adequate awareness initiatives of procurement standards and policies must be made available to public procurement stakeholders. It will help enhance compliance, reduce corruption and improve procurement outcomes.
6. Promote stakeholder collaboration and cooperation: Collaboration and cooperation of procurement stakeholders, including government, contractors, and civil society organizations, would foster transparency and accountability in the procurement process.
7. Regular evaluation and monitoring: The procurement processes must undergo regular evaluation and monitoring to assess the impact of performance, compliance with quality standards, and transparency levels. This helps for future planning.

REFERENCES

1. Abdullahi, B., Ibrahim, Y. M., Ibrahim, A. D., & Bala, K. (2022). Development of a web-based e-tendering system for Nigerian public procuring entities. *International Journal of Construction Management*, 22(2), 278-291. DOI: 10.1080/15623599.2019.1620492
2. Abdulmalik, S. O., & Ahmad, A. C. (2020). Corporate Governance and Financial Regulatory Framework in Nigeria: Issues and Challenges. *Journal of Advanced Research in Business and Management Studies*, 2(1), 50–63. Retrieved from <https://www.akademiabaru.com/submit/index.php/arbms/article/view/1186>
3. Achua, J. K. (2011). Anti-corruption in public procurement in Nigeria: challenges and competency strategies. *Journal of Public Procurement*, 11(3), 323-333. <https://doi.org/10.1108/JOPP-11-03-2011-B002>
4. Aduwo, E. B., Ibem, E. O., Afolabi, A. O., Oluwmi, A. O., Tunji-Olayeni, P. F., Ayo-Vaughan, E. A., Uwakonye, U. O., & Oni, A. A. (2020). Exploring anti-corruption capabilities of e-procurement in construction project delivery in Nigeria. *Construction Economics and Building*, 20(1), 56–76. <https://search.informit.org/doi/10.3316/jinformit.091972364756927>
5. Afolabi, A., Ibem, E., Aduwo, E., & Tunji-Olayeni, P. (2022). Digitizing the grey areas in the Nigerian public procurement system using e-Procurement technologies. *International Journal of Construction Management*, 22(12), 2215-2224. DOI: 10.1080/15623599.2020.1774836
6. Ahmed, H. M. S., Muzeyin, J. R., Ferejo, M. N., & Made, S. J. (2021). Evaluation of Critical Factors Influencing Framework Agreement in Public Procurement: Evidence from Administrative Offices in Ethiopia. *International Journal of Sustainable Development and Planning*, 17(1), 83-90. https://www.researchgate.net/profile/HamedAhmed/publication/359084113_Evaluation_of_Critical_Factors_Influencing_Framework_Agreement_of-Critical-Factors-Influencing-Framework-

- Agreement-in-Public-Procurement-Evidence-from-Administrative-Offices-in-Ethiopia.pdf_sg%5B0%5D=started_experiment_milestone & origin = journal Detail &_rtd=e30%3D
7. Akenroye, T. O., Oyegoke, A. S., & Eyo, A. B. (2013). Development of a framework for the implementation of green public procurement in Nigeria. *International Journal of Procurement Management*, 6(1). <https://www.inderscienceonline.com/doi/full/10.1504/IJPM.2013.050607>
 8. Al-Ibrahim, A. (2014). Quality Management and Its Role in Improving Service Quality in Public Sector. *Journal of Business and Management Sciences*, 2(6), 123-147.
 9. Alvesson, M., & Spicer, A. (2018). Neo-institutional theory and organization studies: a mid-life crisis? *Organization Studies*, 40(2), 199-218. <https://doi.org/10.1177/0170840618772610>
 10. Amadi, C., Carrillo, P., & Tuuli, M. (2018). Stakeholder management in PPP projects: external stakeholders' perspective. *Built Environmental Project and Asset Management*, 8(4), 403-414. <https://doi.org/10.1108/BEPAM-02-2018-0048>
 11. Bohari, A. A. M., Bidin, Z. A., & Khalil, N. (2022). Government Intervention Through Collaborative Approach in Promoting the Adoption of Green Procurement for Construction Projects. *International Journal of Sustainable Construction Engineering and Technology*, 13(2), 68-82. <https://penerbit.uthm.edu.my/ojs/index.php/IJSCET/article/view/11289>
 12. Changalima, I. A., & Mdee, A. E. (2023). Procurement skills and procurement performance in public organizations: The mediating role of procurement planning. *Cogent Business & Management*, 10(1). DOI: 10.1080/23311975.2022.2163562
 13. Changalima, I. A., Ismail, I. J., & Mwiseje, S. S. (2022). Obtaining the best value for money through procurement planning: can procurement regulatory compliance intervene? *Journal of Money and Business*, 2(2), 133-148. <https://doi.org/10.1108/JMB-11-2021-0056>
 14. Changalima, I. A., Mushi, G. O., & Mwiseje, S. S. (2021). Procurement planning as a strategic tool for public procurement effectiveness: Experience from selected public procuring entities in Dodoma city, Tanzania. *Journal of Public Procurement*, 21(1), 37-52. <https://doi.org/10.1108/JOPP-05-2020-0047>
 15. Chikazhe, L., Bhebhe, T., Tukuta, M., Chifamba, O., & Nyagadza, B. (2023). Procurement practices, leadership style and employee-perceived service quality towards the perceived public health sector performance in Zimbabwe. *Cogent Social Sciences*, 9(1). DOI: 10.1080/23311886.2023.2198784
 16. Cuervo-Cazurra, A., Mudambi, R., & Pedersen, T. (2019). Subsidiary power: loaned or owned? the lenses of agency theory and resource dependence theory. *Global Strategy Journal*, 9(4), 491-501. <https://doi.org/10.1002/gsj.1362>
 17. Dikmen, S., Çiçek, H. G. (2023). Fighting Against Corruption and Bribery in Public Procurements During the Covid-19 Pandemic. In: McGee, R. W., Benk, S. (eds) *The Ethics of Bribery*. Springer, Cham. https://doi.org/10.1007/978-3-031-17707-1_18
 18. DiMaggio, P. J., & Powell, W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48, 147-160.
 19. Ebekozi, A., Samsurijan, M. S., Aigbavboa, C., Awe, E. O., Amadi, G. C., & Emuchay, F. E. (2023). Unravelling the encumbrances in procurement management of Nigeria's infrastructure development: pitfalls and prospects of projects. *Property Management*, 41(1), 20-40. <https://doi.org/10.1108/PM-11-2021-0103>
 20. Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *The Academy of Management Review*, 14(1), 57-74.
 21. Familoje, O., Ogunsemi, D. F., & Awodele, O. A. (2015). Assessment of the Challenges Facing the Effective Operations of the Nigeria Public Procurement Act 2007. *International Journal of Economics, Commerce and Management*, III(11), 957-968.
 22. Hardt, L. (2009). The history of transaction cost economics and its recent developments. *Erasmus Journal for Philosophy and Economics*, 2(1), 29. <https://doi.org/10.23941/ejpe.v2i1.22>
 23. Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource Dependence Theory: A Review. *Journal of Management*, 35(6), 1404-1427. <https://doi.org/10.1177/0149206309343469>
 24. Igwe, N. N., Ude, A. O. C., & Chukwu, C. U. (2021). Public Procurement, Transparency and

- Accountability in Nigeria: Dissecting the Benefits and Challenges to Anti-Corruption War. *International Journal of Economics, Commerce and Management*, IX(1), 306-323.
25. Jibrin, M. S., Ejura, S. B., & Augustine, N. I. (2014). The Public Procurement Reforms in Nigeria: Implementation and Compliance Challenges. *Journal of Asian Business Strategy*, 4(11), 149–162. <https://archive.aessweb.com/index.php/5006/article/view/4135>
 26. Kohler, J. C., & Dimancesco, D. (2020). The risk of corruption in public pharmaceutical procurement: how anti-corruption, transparency and accountability measures may reduce this risk. *Global Health Action*, 13(sup1). DOI: 10.1080/16549716.2019.1694745
 27. Kakar, A. S., Hasan, A., Jha, K. N., & Singh, A. (2022). Project cost performance factors in the war-affected and conflict-sensitive Afghan construction industry. *Journal of Engineering, Design and Technology*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JEDT-11-2021-0657>
 28. Kukah, A. S. K., Owusu-Manu, D. G., Badu, E., & Edwards, D. J. (2022). Exploring influencing factors for private sector participation in PPP power projects: the case of Ghana. *Journal of Facilities Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JFM-11-2021-0140>
 29. Kumar, S. (2022). Strategy for Implementing Sustainable Public Procurement Policy in India. In: *Understanding Sustainable Public Procurement. Public Administration, Governance and Globalization*, 21. Springer, Cham. https://doi.org/10.1007/978-3-031-08258-0_6
 30. Luiz, V. T., Nascimento, R. A., Rezende, V. T., Almeida, T. F. Ad., Paz, J. V., Giannetti, B. F., & Gameiro, A. H. (2023). Sustainability Assessment of Intensification Levels of Brazilian Smallholder Integrated Dairy-Crop Production Systems: An Emergy and Economic-Based Decision Approach. *Sustainability*, 15(5), 4674. <https://doi.org/10.3390/su15054674>
 31. Manu, P., Mahamadu, A. M., Booth, C., Olomolaiye, P. O., Coker, A., Ibrahim, A., & Lamond, J. (2019). Infrastructure procurement capacity gaps in Nigeria’s public sector institutions. *Engineering, Construction and Architectural Management*, 26(9), 1962-1985. <https://doi.org/10.1108/ECAM-11-2017-0240>
 32. Manu, P., Mahamadu, A., Booth, C. A., Olomolaiye, P., Ibrahim, A. M., & Coker, A. (2018). Assessment of procurement capacity challenges inhibiting public infrastructure procurement. *Built Environment Project and Asset Management*, 8(4), 386-402. <https://doi.org/10.1108/bepam-02-2018-0038>
 33. Maria, M., Darusalam, D., Yulsiati, H., & Said, J. (2023). Do top Management Competencies, Internal Control Systems, and E-procurement Contribute to Procurement Fraud Prevention? *Research Square*.
 34. Mohammed, S. S. (2019). Public Procurement Act and Economic Performance: Evidence from Nigeria. *Confluence Journal of Economics and Allied Sciences (CJEAS)* 2(2), 172-186. <https://cjeas.org/assets/journals/volume2/issue2/cjeas-V2I2A13.pdf>
 35. Mutisya, H. K. (2022). Procurement Governance, Integrative Supply Chain Technology, Procurement Performance and Service Delivery at State Ministries, Departments and Agencies in Kenya. *University of Nairobi Research Archives*. <http://erepository.uonbi.ac.ke/handle/11295/163283>
 36. OECD. (2009). *OECD Principles for Integrity in Public Procurement*. <https://www.oecd.org/gov/ethics/48994520.pdf>
 37. Olatunji, S. O., Olawumi, T. O., & Odeyinka, H. A. (2016). Nigeria’s Public Procurement Law-Puissant Issues and Projected Amendments. *Journal of Economics and Sustainable Development*, 6(6), 73-85.
 38. Olusegun, S. B., Akinsiku, O. E., & Akinbode, J. O. (2016). Factors Affecting Due Process Compliance in the Procurement of Public Goods in Federal Tertiary Institutions in Lagos State, Nigeria. *The Nigerian Journal of Business and Social Sciences*, 9(1), 167-182.
 39. Oluwabukunmi A. Ogunsanya, Clinton O. Aigbavboa, Didibhuku W. Thwala & David J. Edwards (2022). Barriers to sustainable procurement in the Nigerian construction industry: an exploratory factor analysis. *International Journal of Construction Management*, 22(5), 861-872. DOI: 10.1080/15623599.2019.1658697
 40. Oluwaseun, O. A., & Oluwaseun, O. A. (2018). Quality Assurance in Public Procurement: A Catalyst

- for Sustainable Development in Nigeria. *Journal of Public Administration and Governance*, 8(4), 1-15.
41. Opawole, A., Alao, O. O., Yusuf, A. O., Adu, E. T., & Ofoetan, M. A. (2022). Evaluation of compliance of concreting materials to standards in building projects in Lagos State, Nigeria. *Journal of Construction Business and Management*, 5(2), 1–19. <https://doi.org/10.15641/jcbm.5.2.1182>
 42. Polonsky, M. J., Wijayasundara, M., Noel, W., & Vocino, A. (2022). Identifying the drivers and barriers of the public sector procurement of products with recycled material or recovered content: A systematic review and research propositions. *Journal of Clear Production*, 358. <https://www.sciencedirect.com/science/article/abs/pii/S0959652622013920>
 43. Raja, D. (2023). Key Challenges for Sustainable Procurement. SIPMM. <https://publication.sipmm.edu.sg/key-challenges-sustainable-procurement/>
 44. Shwarka, M. S. (2019). Impact of the Nigerian procurement reform on planning practices of construction practitioners. *FUTY Journal of Environment*, 13(2). <https://www.ajol.info/index.php/fje/article/view/193303>
 45. Soala, W. (2020). Stakeholder Management in Public Procurement: Rethinking the Engagement Strategy for Co-Financing in Rivers State. <https://ssrn.com/abstract=3758216> or <https://dx.doi.org/10.2139/ssrn.3758216>
 46. Thakkar, J. J. (2022). Project Procurement and Contracts Management. In: *Project Management. Management and Industrial Engineering*. Springer, Singapore. https://doi.org/10.1007/978-981-15-3695-3_12
 47. Tukuta, M., & Saruchera, F. (2015). Challenges facing procurement professionals in developing economies: Unlocking value through professional international purchasing. *Journal of Transport and Supply Chain Management* 9(1), Art. #152. <https://dx.doi.org/10.4102/jtscm.v9i1.152>
 48. Tumbat, G., & Grayson, K. (2016). Authority relinquishment in agency relationships. *Journal of Marketing*, 80(3), 42-59. <https://doi.org/10.1509/jm.12.0349>
 49. Williamson, O. E. (1991). Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. *Administrative Science Quarterly* 36, 269–296.
 50. Yahaya, M. L., Hamid-Mosaku, I. A., Onukwube, H. N., & Babalola, A. J. (2020). Assessing the influence of monitoring and knowledge-related challenges on compliance with public procurement law in North-West, Nigeria. *Research Journal of Business and Economic Management* 3(1), 1-13. https://www.researchgate.net/profile/MohammedYahaya/publication/357187758_Assessing_the_influence_of_monitoring_and_knowledge_related_challenges_on_compliance_with_public_procurement_law_in_NorthWest_Nigeria/links/61c0f960a6251b553ad304cc/Assessing-the-influence-of-monitoring-and-knowledge-related-challenges-on-compliance-with-public-procurement-law-in-North-West-Nigeria.pdf