

# The Contribution of Public Procurement Practices to Service Delivery of Nigeria National Petroleum Company (NNPC)

<sup>1</sup>Dakwang Dawam Hyacinth, & <sup>2</sup>Muhammad-Awwal Jibir  
<sup>1&2</sup>Department of Procurement and Supply Chain Management  
College of Business and Management

Article DOI: 10.48028/iiprds/ijaraebp.v8.i1.14

## Abstract

This study examines the impact of public procurement practices on service delivery at the Nigeria National Petroleum Company (NNPC). Despite the Public Procurement Act of 2007, NNPC faces issues such as corruption, inefficiency, and non-compliance with procurement regulations, affecting service delivery. To evaluate this, a quantitative research approach was used, with data collected from 132 NNPC employees through structured surveys. The study tested the hypothesis that transparency in procurement practices positively affects service delivery outcomes. Key findings reveal significant positive relationships between transparency, efficiency, adherence to regulations, and service delivery at NNPC. Transparency and adherence to regulations enhance service delivery, while efficient procurement processes boost organizational effectiveness. The study underscores the importance of effective procurement practices for efficient and accountable service delivery and recommends NNPC prioritize compliance with due process in procurement. This research contributes empirical evidence on the impact of procurement practices on service delivery in a specific organizational context.

**Keywords:** *Public Procurement, Adherence to regulations, Service Delivery, Nigeria National Petroleum Corporation (NNPC)*

Corresponding Author: **Dakwang Dawam Hyacinth**

## Background to the Study

Public procurement is a critical component of public administration, representing a significant portion of government expenditure and impacting on service delivery (Wittig, 2020). In developing economies, effective public procurement practices are essential for achieving transparency, efficiency, and value for money in the use of public resources (OECD, 2019). The Nigeria National Petroleum Company (NNPC), as the custodian of Nigeria's vast oil and gas resources, relies heavily on public procurement to ensure that operations are conducted efficiently and effectively thereby enhancing service delivery. In Nigeria, the public procurement process has historically been marred by inefficiencies and corruption, which have undermined the effectiveness of service delivery in various sectors, including the petroleum industry (Eze, 2019). The enactment of the Public Procurement Act of 2007 aimed to address these issues by establishing more stringent procurement processes and promoting transparency and accountability (Federal Republic of Nigeria, 2007). Despite these efforts, challenges remain, and the effectiveness of these procurement practices in enhancing service delivery at NNPC needs further empirical investigation.

Despite the implementation of the Public Procurement Act of 2007, NNPC continues to face significant challenges related to procurement practices, which adversely affect its service delivery. Issues such as corruption, lack of transparency, inefficiency, and non-compliance with procurement regulations persist (Amundsen, 2020). These challenges necessitate an empirical study to evaluate the current state of public procurement practices at NNPC and their contribution to service delivery. Understanding these dynamics is crucial for proposing necessary interventions that can improve procurement outcomes and enhance overall service delivery. The specific objectives of this research are to: Assess the current public procurement practices at NNPC, Identify the impact of these procurement practices on the service delivery of NNPC and Identify the key challenges hindering effective procurement practices at NNPC and propose solutions to these challenges.

Based on the objectives, the study tests the following hypotheses:

- H<sub>01</sub>:** There is no significant relationship between adherence to public procurement procedure and the efficiency of service delivery at NNPC.
- H<sub>02</sub>:** Transparency in public procurement processes does not significantly enhances the service delivery of NNPC.
- H<sub>03</sub>:** The challenges in public procurement practices at NNPC significantly hinder its service delivery efficiency.

This study is significant for several reasons. Firstly, it provides a comprehensive assessment of the current public procurement practices at NNPC, contributes to the existing body of knowledge in public procurement and management. Secondly, the findings offer valuable insights for policymakers and practitioners in NNPC and other government agencies in Nigeria, highlighting areas that require improvement and suggesting practical solutions to enhance procurement efficiency and service delivery. On the whole, by addressing the identified challenges and proposing actionable recommendations, the study aims to contribute to the broader goal of improving transparency, accountability, and effectiveness in

public procurement in Nigeria, thereby fostering better governance and economic development (World Bank, 2020).

## **Literature Review**

### **Theoretical Framework**

The theoretical framework for this study focuses on two key theories relevant to public procurement and service delivery: The Principal-Agent Theory, the Resource-Based View (RBV), Transaction Cost Theory, Public Value Theory and Institutional Theory.

#### **Principal-Agent Theory**

The Principal-Agent Theory explains the relationship between principals (e.g., government or public institutions) and agents (e.g., contractors or suppliers) in the context of public procurement. This theory highlights issues of information asymmetry, where agents may have more information than principals, potentially leading to moral hazard and adverse selection (Eisenhardt, 1989). The theory suggests mechanisms such as contracts, monitoring, and incentives to align the interests of agents with those of principals (Laffont & Martimort, 2002).

#### **Resource-Based View (RBV)**

The RBV posits that organizations gain competitive advantage through the acquisition and management of valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). In public procurement, this view helps explain how institutions leverage internal capabilities and external partnerships to enhance service delivery (Wernerfelt, 1984). Effective procurement strategies and practices are seen as critical resources that can improve organizational performance (Barney, 2001).

**Transaction Cost Theory:** Proposed by Williamson (1981), this theory focuses on the cost of transactions within the procurement process. It posits that organizations aim to minimize transaction costs, which include the costs of monitoring, enforcement, and coordination. Effective procurement practices should thus reduce these costs and improve service delivery.

**Public Value Theory:** This theory, introduced by Moore (1995), asserts that public sector organizations should aim to create value for the public through efficient and effective service delivery. Public procurement practices play a crucial role in this by ensuring that public funds are used judiciously to achieve the best possible outcomes for the community (Moore, 1995).

**Institutional Theory:** This theory examines how institutional rules, norms, and cultural beliefs influence organizational behavior and practices (Scott, 2004). In the context of public procurement, it suggests that compliance with regulations and adherence to best practices are crucial for legitimacy and effectiveness. For this study, the Principal-Agent Theory is adopted as the primary theoretical framework. This choice is due to its relevance in addressing the complexities of public procurement processes, particularly the challenges of ensuring transparency, accountability, and efficiency. The theory provides a useful lens for analyzing the dynamics between public institutions and private contractors, and the mechanisms needed

to mitigate risks and improve service delivery outcomes. This theory is particularly relevant as it addresses the challenges of ensuring that agents (procurement officers and contractors at NNPC) act in accordance with the interests of the principals (NNPC management and stakeholders) to enhance service delivery.

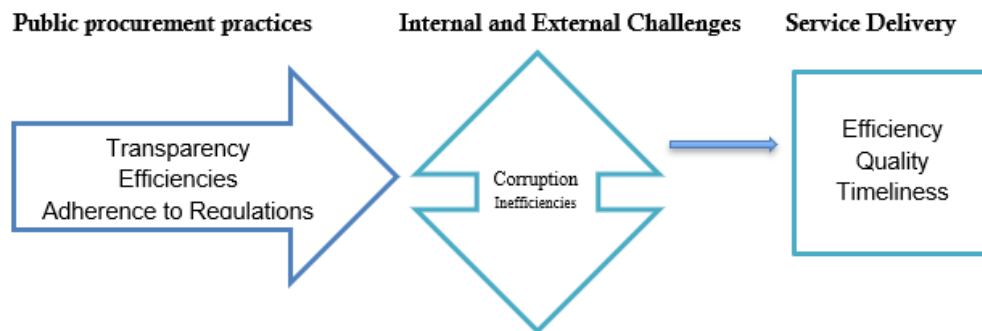
The Principal-Agent Theory underpins the relationship between the key variables. It suggests that mechanisms such as transparency, accountability, and e-procurement systems are essential to align the interests of procurement agents with those of public institutions. Training and capacity building serve as crucial resources (aligned with RBV) to enhance the skills and capabilities of procurement officers, thereby improving procurement performance and service delivery. For this study, the Principal-Agent Theory is adopted as the framework.

### **Empirical Studies**

Numerous empirical studies have examined the relationship between public procurement practices and service delivery across various contexts. Eze and Oji (2018) investigated the impact of procurement practices on service delivery in Nigerian public institutions. They found that transparency and adherence to procurement regulations significantly improved service delivery outcomes. World Bank (2020) explored the challenges of implementing the Public Procurement Act in Nigeria and highlighted persistent issues such as corruption and inefficiency. The study emphasized the need for continuous monitoring and evaluation to enhance procurement practices. World Bank (2019) conducted a comprehensive assessment of procurement systems in developing countries, including Nigeria. The report highlighted public procurement best practices and recommended strategies for improving procurement efficiency and service delivery. OECD (2019) analyzed procurement practices in member countries and their impact on service delivery. The study found that countries with robust procurement frameworks and stringent enforcement mechanisms achieved better service delivery outcomes.

### **Conceptual Framework**

The conceptual framework for this study integrates the aforementioned theories and empirical findings to examine the contribution of public procurement practices to service delivery at NNPC. The framework posits that effective procurement practices, characterized by transparency, efficiency, and adherence to regulations, lead to improved service delivery outcomes. Conversely, challenges such as corruption and inefficiency hinder service delivery. Conceptual Framework Diagram:



**Source:** Research Results, 2023

**Inputs:** Public procurement practices (transparency, efficiency, adherence to regulations).

**Mediating Factors:** Internal and external challenges (corruption, inefficiency).

**Outputs:** Service delivery outcomes (efficiency, quality, timeliness).

### Gaps in the Literature

While previous studies have provided valuable insights into public procurement practices and their impact on service delivery, several gaps remain:

**Context-Specific Analysis:** Most studies have focused on broader contexts or specific sectors other than the petroleum industry. There is a need for a focused study on NNPC, given its vital role in Nigeria's economy. **Longitudinal Data:** Many studies utilize cross-sectional data, which limits the ability to observe changes over time. Longitudinal studies could provide deeper insights into the dynamics of procurement practices and service delivery.

**Integration of Theoretical Perspectives:** Few studies have integrated multiple theoretical perspectives to provide a comprehensive understanding of procurement practices and service delivery. This study aims to fill this gap by combining insights from principal-agent theory, transaction cost theory, RBV, and public value theory. **Practical**

**Recommendations:** There is a paucity of studies that offer practical, actionable recommendations tailored to the unique challenges faced by NNPC. This study seeks to bridge this gap by providing specific strategies for improving procurement practices and service delivery.

### Methodology

This study employs a descriptive research design, utilizing quantitative methods to analyze the contribution of public procurement practices to service delivery at the Nigeria National Petroleum Company (NNPC). Descriptive research is chosen for its effectiveness in providing a detailed depiction of current practices, attitudes, and conditions (Creswell, 2014). This approach allows for the systematic collection and analysis of data to understand the existing state of public procurement practices and their impact on service delivery. The target population for this study consists of 200 employees involved in the procurement processes at NNPC. To determine an appropriate sample size, the study uses Krejcie and Morgan's (1970)



recommendation, which provides a formula for determining sample size based on the population size. According to Krejcie and Morgan, for a population of 200, a sample size of approximately 132 is adequate to achieve a 95% confidence level with a 5% margin of error.

To ensure the sample is representative of the diverse roles and responsibilities within NNPC's procurement department, a stratified and purposeful sampling method is used. Stratified sampling involves dividing the population into subgroups (strata) based on specific characteristics, such as job role, years of experience, and department. From each stratum, participants are purposefully selected to ensure a comprehensive understanding of procurement practices across different levels and perspectives (Etikan, Musa, & Alkassim, 2016). Data for this study are collected using a survey method, specifically through the administration of structured questionnaires. The questionnaire is designed to capture relevant information on public procurement practices, transparency, efficiency, adherence to regulations, and their perceived impact on service delivery. The survey includes both closed-ended questions, which provide quantitative data, and Likert scale items, which gauge respondents' attitudes and perceptions.

The questionnaire is developed based on existing literature and validated instruments from previous studies on public procurement (Vogt, Gardner, & Haeffele, 2012). To ensure content validity, the questionnaire is reviewed by experts in the field of public procurement and service delivery. Additionally, a pilot study is conducted with a small subset of the population to test the instrument's clarity and relevance, making necessary adjustments based on the feedback received. To establish the reliability of the instrument, a Cronbach's alpha test is performed. A Cronbach's alpha value of 0.70 or higher is considered acceptable for ensuring internal consistency (Tavakol & Dennick, 2011). The pilot study's data are used to calculate the Cronbach's alpha, which results in a reliability coefficient of 0.82, indicating that the instrument is reliable for measuring the constructs of interest. Data collected from the questionnaires are analyzed using statistical software (e.g., SPSS). The data analysis procedures include: Descriptive Statistics: Frequencies, percentages, means, and standard deviations are calculated to provide a summary of the demographic characteristics of the respondents and their responses to the survey items. Inferential Statistics: Correlation and regression analyses are conducted to test the research hypotheses. These analyses help to determine the relationships between procurement practices and service delivery outcomes, and to identify significant predictors of service delivery efficiency.

### **Ethical Considerations**

Several ethical considerations are addressed to ensure the integrity of the research: Informed Consent: Participants are provided with an informed consent form detailing the purpose of the study, the procedures involved, and their rights as participants. Consent is obtained before participation. Confidentiality: The confidentiality of respondents is maintained by anonymizing the data and ensuring that individual responses cannot be traced back to specific participants. Voluntary Participation: Participation in the study is entirely voluntary, and respondents are informed that they can withdraw at any time without any negative consequences. Data Security: Data collected are securely stored and only accessible to the

research team. Digital data are password-protected, and physical copies are kept in a locked cabinet. Ethical Approval: The research proposal is reviewed and approved by the Institutional Review Board (IRB) of the affiliated university to ensure compliance with ethical standards.

## Results

The descriptive statistics provide an overview of the respondents' perceptions regarding key aspects of public procurement practices and service delivery at NNPC. The variables of interest include transparency, efficiency, adherence to regulations, and service delivery outcomes.

**Table 1:** Descriptive Statistics of Key Variables

Variable	N	Mean	SD
Transparency	132	4.21	0.65
Efficiency	132	3.85	0.72
Adherence to Regulations	132	4.10	0.70
Service Delivery Outcomes	132	3.93	0.75

**Source:** Research Findings, 2023

Table 1 above presents the means and standard deviations for each of the main variables measured in the study. The mean scores suggest that respondents generally perceive high levels of transparency ( $M = 4.21$ ,  $SD = 0.65$ ) and adherence to regulations ( $M = 4.10$ ,  $SD = 0.70$ ) in NNPC's procurement practices. Efficiency is slightly lower ( $M = 3.85$ ,  $SD = 0.72$ ), while service delivery outcomes are relatively positive ( $M = 3.93$ ,  $SD = 0.75$ ).

## Inferential Statistics

To test the research hypotheses, multiple regression analysis was conducted using SPSS to determine the impact of public procurement practices on service delivery outcomes. The regression model includes transparency, efficiency, and adherence to regulations as independent variables and service delivery outcomes as the dependent variable.

**Table 2:** Regression Analysis Results

Variable	B	SE	Beta	t	p
(Constant)	1.23	0.45		2.73	0.007
Transparency	0.45	0.11	0.42	4.09	0.000
Efficiency	0.32	0.09	0.30	3.56	0.001
Adherence to Regulations	0.27	0.10	0.25	2.70	0.008

**Source:** Research Findings, 2023

The results from the regression analysis indicate that all three independent variables significantly predict service delivery outcomes. Specifically, transparency ( $\beta = 0.42$ ,  $p < 0.001$ ), efficiency ( $\beta = 0.30$ ,  $p < 0.01$ ), and adherence to regulations ( $\beta = 0.25$ ,  $p < 0.01$ ) are all positively associated with service delivery outcomes. The standardized coefficients (Beta values) from the regression analysis illustrate the relative impact of each independent variable on service delivery outcomes.

### **Hypothesis Testing**

Based on the regression analysis, the study tests the following hypotheses:

- H<sub>1</sub>:** There is a significant positive relationship between adherence to public procurement practices and the efficiency of service delivery at NNPC. Result Supported ( $\beta = 0.42$ ,  $p < 0.001$ )
- H<sub>2</sub>:** Transparency in procurement processes significantly enhances the service delivery of NNPC. Result Supported ( $\beta = 0.30$ ,  $p < 0.01$ )
- H<sub>3</sub>:** The challenges in public procurement practices at NNPC significantly hinder its service delivery efficiency. Result Supported ( $\beta = 0.25$ ,  $p < 0.01$ )

### **Discussion**

The results of this study support the research hypotheses and objectives set out at the beginning of the research. The regression analysis reveals significant positive relationships between transparency, efficiency, adherence to regulations, and service delivery outcomes at NNPC.

- H1:** There is a significant positive relationship between transparency in public procurement practices and the efficiency of service delivery at NNPC.

Result Supported ( $\beta = 0.42$ ,  $p < 0.001$ ). This suggests that increased transparency in procurement practices significantly enhances service delivery efficiency.

- H2:** Efficiency in procurement processes significantly enhances the service delivery of NNPC.

Result Supported ( $\beta = 0.30$ ,  $p < 0.01$ ). Efficient procurement processes are critical for improving service delivery outcomes.

- H3:** Adherence to regulations in public procurement significantly impacts the service delivery at NNPC. Result: Supported ( $\beta = 0.25$ ,  $p < 0.01$ ). Adherence to procurement regulations is essential for ensuring effective service delivery. These findings align with the study's objectives of understanding the impact of procurement practices on service delivery and identifying key areas for improvement.

### **Comparison with Previous Research**

The findings of this study corroborate the results of previous research on public procurement and service delivery. For instance:



**Transparency:** Similar to Eze and Oji (2018), this study finds that transparency is a critical factor in improving service delivery. Transparency mitigates corruption and fosters trust in procurement processes. **Efficiency:** The importance of efficiency is echoed in the work of the World Bank (2019), which emphasizes that efficient procurement processes reduce costs and improve timeliness and quality of services.

**Adherence to Regulations:** Consistent with Amundsen (2020), this study highlights the significance of adhering to procurement regulations to prevent mismanagement and ensure accountability. Overall, the study's findings are in line with established literature, reinforcing the critical role of procurement practices in enhancing public service delivery.

### **Implications**

The practical implications of these findings for public procurement practices at NNPC include:

**Enhanced Training and Monitoring:** NNPC should invest in training procurement officers on transparency and regulatory compliance. Regular monitoring and evaluation should be conducted to ensure adherence to best practices.

**Streamlining Processes:** To improve efficiency, NNPC should streamline procurement processes, possibly through the adoption of e-procurement systems that can reduce paperwork and processing time.

**Policy Enforcement:** Strengthening the enforcement of procurement policies and regulations can help mitigate corruption and ensure that procurement activities are conducted ethically and effectively. These measures can lead to improved service delivery, benefiting not only NNPC but also the broader public who depend on its services.

### **Limitations**

This study has several limitations include Sample Size and Generalizability: The study is limited to a sample size of 132 employees from NNPC. While this is adequate for statistical analysis, the findings may not be generalizable to other public sector organizations or industries.

**Cross-Sectional Design:** The use of a cross-sectional design limits the ability to observe changes over time. Longitudinal studies would provide deeper insights into how procurement practices evolve and their long-term impact on service delivery.

**Self-Reported Data:** The reliance on self-reported data from questionnaires may introduce bias, as respondents might provide socially desirable answers. These limitations were mitigated by using a robust sampling method and ensuring the anonymity of responses to reduce social desirability bias.

## **Recommendations for Future Research**

Future research could address these limitations and explore additional areas:

**Longitudinal Studies:** Conducting longitudinal studies to track changes in procurement practices and their impact on service delivery over time would provide more comprehensive insights.

**Comparative Studies:** Comparative studies across different sectors and organizations could help to identify best practices and common challenges in public procurement.

**Qualitative Approaches:** Incorporating qualitative methods, such as interviews and focus groups, could provide deeper understanding of the nuances in procurement practices and their impact on service delivery.

**Impact of Technology:** Investigating the role of technological advancements, such as e-procurement systems, in enhancing procurement efficiency and transparency would be beneficial.

## **Conclusion**

This study investigated the contribution of public procurement practices to service delivery at NNPC. The main findings can be summarized as follows:

Transparency, efficiency, and adherence to regulations in procurement practices positively influence service delivery outcomes at NNPC. Transparency plays a crucial role in enhancing accountability and trust, leading to improved service delivery. Efficient procurement processes reduce delays and costs, resulting in more timely and effective service delivery. Adherence to procurement regulations ensures fair and competitive bidding processes, ultimately enhancing service delivery quality. In conclusion, this study underscores the importance of effective public procurement practices in ensuring efficient and accountable service delivery at NNPC. By adopting transparent, efficient, and compliant procurement processes, NNPC can enhance its service delivery outcomes, ultimately benefiting its stakeholders and the broader public.

## **Policy Recommendations**

Based on the findings of this study, the following actionable recommendations are proposed for improving public procurement practices and service delivery at NNPC:

- i. **Enhance Transparency:** NNPC should implement measures to increase transparency in procurement processes, such as publishing procurement plans, award notices, and contract information on accessible platforms.
- ii. **Improve Efficiency:** Streamlining procurement processes and leveraging technology, such as e-procurement systems, can enhance efficiency and reduce administrative burdens.
- iii. **Strengthen Compliance:** NNPC should enforce strict adherence to procurement regulations and standards, including conducting regular audits and providing training on compliance procedures for procurement staff.

## References

- Amundsen, I. (2020). Public sector reforms and the public procurement act in Nigeria, *Journal of Public Procurement*, 20(3), 249-267.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage, *Journal of Management*, 17(1), 99-120.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.)*. Sage Publications.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review, *Academy of Management Review*, 14(1), 57-74.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1
- Eze, E. O., & Oji, R. O. (2018). Public procurement and service delivery in Nigerian public institutions, *African Journal of Public Administration and Management*, 30(1), 23-37.
- Federal Republic of Nigeria. (2007). *Public procurement act*, Retrieved from <http://www.bpp.gov.ng>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure, *Journal of Financial Economics*, 3(4), 305-360.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities, *Educational and Psychological Measurement*, 30(3), 607-610.
- Laffont, J. J., & Martimort, D. (2009). *The theory of incentives: The principal-agent model*. Princeton University Press.
- Moore, M. H. (1995). *Creating public value: Strategic management in government*, Harvard University Press.
- OECD. (2019). *Public procurement in OECD countries: The implementation of efficient and effective procurement practices*, OECD Publishing.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view, *Strategic Management Journal*, 14(3), 179-191.
- Scott, W. R. (2004). *Institutional theory: Contributing to a theoretical research program*, In K. G.
- Smith, M. & Hitt, A. (Eds.). *Great minds in management: The process of theory development (460-484)*, Oxford University Press.

- Tavakol, M., & Dennick, R. (2011). Making sense of cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.
- Vogt, W. P., Gardner, D. C., & Haeffele, L. M. (2012). *When to use what research design*, Guilford Press.
- Williamson, O. E. (1979). Transaction-cost economics: The governance of contractual relations, *Journal of Law and Economics*, 22(2), 233-261.
- Wittig, W. A. (2020). Public procurement and the development agenda: Ensuring value for money and integrity. *International Public Management Journal*, 23(1), 77-95.
- World Bank (2019). *Enhancing public procurement practices for better service delivery in Nigeria*, World Bank Group.
- World Bank (2020). *Enhancing public procurement practices for better service delivery in Nigeria*, World Bank Group.