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Strategic Procurement Practices and Organisational Performance in Selected Nigerian Federal Ministries

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Abstract: *In Nigerian federal ministries, challenges of inefficiency, non-compliance and poor institutional performance continue to plague public procurement, but there is little empirical research to date that explores how organisational performance is influenced by a combination of strategic procurement dimensions in this particular context. This research examined how procurement planning, supplier relationship management, risk management practices and sustainable procurement have impacted organisational performance in the selected federal ministries in Nigeria. A quantitative cross-sectional design was embraced with the data being gathered on 376 procurement related employees in 36 federal ministries using structured questionnaires and analysed using multiple regression. The results establish that procurement planning ($\beta = 0.412$, $p < 0.001$), supplier relationship management ($\beta = 0.261$, $p < 0.001$), risk management practices ($\beta = 0.198$, $p < 0.01$), and sustainable procurement ($\beta = 0.143$, $p < 0.05$) all positively and significantly affect organisational performance, with the model explaining 63.4% of performance variation. Procurement planning exerts the strongest effect, while sustainable procurement records the weakest. Federal ministries require structured procurement planning systems, formalised supplier governance frameworks, and regulatory support for sustainable procurement adoption to achieve measurable performance improvements*.

Keywords: strategic procurement, procurement planning, supplier relationship management, risk management practices, sustainable procurement, organisational performance.

INTRODUCTION

Strategic procurement has become the core business in the running of organisations in the public sector all over the world. In most developing economies, procurement spending is a significant portion of government spending, and in sub-Saharan Africa, the public procurement amounts to between 15% and 30% of gross domestic product (Jama & Mohamud, 2024). In this respect, efficiency and accountability of public administration are directly influenced by the decisions made by governments concerning the way they purchase goods, works, and services. The federal ministries as the main administrative organs of national governance in Nigeria have the unreasonable burden of procurement, thus the quality of their procurement systems is of national interest.

The strategic aspect of procurement is a shift towards its traditional understanding of an activity that is purely transactional. Oputa et al. (2025) determined that strategic procurement practices have a considerable influence on organisational performance, having quantifiable impacts in operational efficiency, competitiveness, and profitability. This was further confirmed by Adda (2024), who showed that strategic procurement contributes to organisational success by its ability to align supply chain operations with institutional goals. By developing a strategic approach to procurement, organisations can develop systematic benefits that go beyond cost savings and into the quality of service delivery and responsiveness to operations.

The initial component within which the strategic intent is converted into the operation results is procurement planning. Mukizia and Nimpano (2025) discovered that the elements of procurement planning, such as needs assessments, market surveys and supply identification, accounted 72.3% of the variation in organisational performance in the Ministry of Education of Rwanda. Abdallah et al. (2024) also found procurement planning to be the most influential variable on performance among Kuwaiti medical equipment companies with a path coefficient of 0.679. The findings highlight the importance of systematic planning as a requirement to successful deployment of resources within government institutions.

Supplier relationship management also defines the performance capacity of organisations which rely on external suppliers in their operation. Oyedokun et al. (2021) established that supplier relationship management had the highest mean score of procurement policy variables that impact performance in the University College Hospital in Ibadan, Nigeria. In contrast, Obasa and Gado (2022) found that contract monitoring and evaluation did not significantly impact organisational performance at Nigeria's Bureau of Public Procurement. The dissimilarity of these results indicates that the effect of supplier-oriented practices is institutional context-dependent, quality of governance, and consistency of payment commitments to suppliers (Chinogwenya and Utete, 2023).

Another aspect in which procurement strategy influences institutional performance is risk management practices. Adda (2024) revealed that the practices of risk management were positively related to strategic procurement and organisational performance of Ghanaian industrial firms. The institutional complexity, political interference and poor procurement regulations enforcement characterise the environment of public procurement in Nigeria (Ndukwe & Nebo, 2025). These circumstances increase the procurement risk to unmanageable proportions that makes structured risk management practices essential in ministries that need to provide services with limited fiscal and regulatory conditions.

Sustainable procurement has been an academic and policy issue as governments attempt to fit the overall spending of the state with environmental and social goals. Habila et al. (2025) discovered that sustainable procurement practices achieved strong positive impacts in all the organisational performance measures they measured, such as operational efficiency and corporate reputation, among the sampled manufacturing companies in Nigeria. However, there are some major obstacles, such as high initial cost and low supplier capacity locally that hinder its adoption. Eyo et al. (2023) observed a negative correlation between sustainable procurement and organisational performance in tertiary institutions in Bayelsa State, which indicates a lack of implementation peculiar to the Nigerian context.

Despite the documented significance of these procurement dimensions, empirical evidence addressing their combined effect on the performance of Nigerian federal ministries remains scarce. Kanu et al. (2021) highlighted the absence of a comprehensive body of knowledge governing procurement practice across Nigeria's MDAs, while Williams and Andrew (2021) noted that transparency deficits continue to undermine procurement outcomes in federal civil service institutions. The Nigerian public procurement framework, established through the Public Procurement Act of 2007, has not resolved persistent challenges of non-compliance and political interference (Ndukwe & Nebo, 2025). This study, therefore, examines the effect of procurement planning, supplier relationship management, risk management practices, and sustainable procurement on organisational performance in selected Nigerian federal ministries. The findings aim to fill an evidence gap and provide actionable policy insights for procurement reform in Nigeria's federal public sector. The Specific Objectives:

i. Examine the effect of procurement planning on organizational performance in selected Nigerian Federal Ministries.
ii. Evaluate the effect of supplier relationship management on organizational performance in selected Nigerian Federal Ministries.
iii. Assess the effect of risk management practices on organizational performance in selected Nigerian Federal Ministries.
iv. Determine the effect of sustainable procurement practices on organizational performance in selected Nigerian Federal Ministries.

The following null hypotheses were raised for the study:

$H0_1$: Procurement planning has no significant effect on organizational performance in selected Nigerian Federal Ministries.
$H0_2$: Supplier relationship management has no significant effect on organizational performance in selected Nigerian Federal Ministries.
$H0_3$: Risk management practices have no significant effect on organizational performance in selected Nigerian Federal Ministries.
$H0_4$: Sustainable procurement practices have no significant effect on organizational performance in selected Nigerian Federal Ministries.

LITERATURE REVIEW

Conceptual Review

Strategic procurement is an organisation-wide approach to the acquisition of goods and services in a way that is both strategic to the organisations goals, maximises value and minimises operational risk. According to Oputa et al. (2025), strategic procurement practices refer to sourcing, supplier relationship management, and digital procurement tools that have specific roles in augmenting organisational competitiveness. At the conceptual level, strategic procurement is a break with the norms of transactional buying in that it integrates planning, supplier management, risk reduction and sustainability issues into a cohesive management system. Adda (2024) operationalises this conception by four constructs; strategic procurement, supplier relationship management, risk management practices, and sustainable procurement, which have quantifiable correlations with organisational performance.

Procurement planning is a process by which organisations predict their needs, evaluate markets, determine the sources of supply and plan their purchases according to their operational requirements. According to Mukumezi and Nimpano (2025), the key dimensions of procurement planning include needs assessments, market surveys, identification of supplies and payment terms. Abdallah et al. (2024) also contextualize procurement planning as the mechanism of getting supplies at the right time and at the right cost, placing it as the most important procurement factor influencing performance among practices that they considered. Supplier relationship management on the other hand is the coordinated relationship between a buying organisation and its suppliers to create value to both parties. According to Oyedokun et al. (2021), supplier relationship management is a variable of procurement policy that regulates the way an organisation interacts with suppliers via negotiation, competitive bidding and formal dialogue that works towards enhancing quality and reliability in the delivery.

Risk management procurement is concerned with risk identification, evaluation, and management of threats that are generated within the supply chain, and interfere with the achievement of institutional objectives. Adda (2024) considers risk management practices as a separate procurement construct that has a positive impact on strategic procurement orientation and organisational performance. Sustainable procurement can be defined as a combination of environmental, social and economic factors in purchasing. According to Habila et al. (2025), sustainable procurement can be defined as a practice that considers suppliers and contracts to meet criteria beyond price and delivery that include waste reduction, carbon footprints, and social equity. The dependent variable organisational performance is a multi-dimensional variable that is measured in terms of financial performance, operational efficiency, quality of service delivery, and corporate reputation (Habila et al., 2025; Jama and Mohamud, 2024). The dimensions of performance in the public sector are usually transparency, value of money, and responsiveness to citizens needs, and all these aspects are directly influenced by procurement decisions (Ndukwe and Nebo, 2025).

Empirical Review

The connection between organisational performance and procurement planning is always supported by empirical studies in various institutional contexts. Mukimumaka and Nimpano (2025) discovered that four dimensions of procurement planning jointly predicted 72.3% of the organisational performance variance in the Rwanda Ministry of Education, with market surveys yielding the highest single correlation ($r = 0.762$). Abdallah et al. (2024) revealed that procurement planning had the largest path coefficient (0.679) of all the procurement practice factors investigated in Kuwaiti medical equipment firms, which supports the perception that systematic planning is at the heart of performance enhancement. The results of Mebrate and Shumet (2024) were also consistent in Ethiopian state universities, where the procurement planning has a significant and positive influence on organisational performance, but the inventory management and procurement control do not have any significant correlation. All these studies make procurement planning an empirically proven performance driver, however, its power is dependent on institutional capability and circumstances.

The relationship between supplier relationship management and organisational performance has a more complicated picture of its empirical relationship. In the study by Oyedokun et al. (2021), the supplier relationship management achieved the highest average out of the tested procurement policy variables in the University College Hospital in Ibadan, with all of the hypotheses rejected in favour of significant performance impact. In a study by Yusuf et al. (2024), supplier integration had a positive impact on quality service delivery with a path coefficient of 0.907 among the Lafarge Cement Plc. employees in Ilorin. Obasa and Gado (2022) discovered that the selection of suppliers was positively and significantly associated with organisational performance in the Bureau of Public Procurement in Nigeria. Chinogwenya and Utete (2023) provided a different conclusion and discovered that buyer supplier relationships did not significantly contribute to performance within a Zimbabwean public sector organization, which they explained by the fact that money was delayed to be paid to suppliers.A related, although less pronounced, finding was made by Adda (2024), who determined that supplier relationship management did not directly impact organisational performance in Ghana, implying that its effects are indirect via strategic procurement orientation. Such conflicting results suggest that other structural and payment-related variables mediate the process of translation of supplier relationships into organisational benefits.

There has been a relatively lower empirical study on risk management practices, which do manifest themselves in the context of larger procurement systems. Adda (2024) determined that risk management practices had a positive influence on strategic procurement and organisational performance, which were corroborated by PLS-SEM analysis of 437 respondents in Ghana. Asekunowo and Ayodele (2018) discovered that eight out of ten procurement policy variables such as adequate needs assessment affected the project performance outcomes in Ondo State, Nigeria where lack of formal risk structures resulted into continuity of cost overruns, time overruns, and project abandonment. Ndukwe and Nebo (2025) cited lack of adherence to procurement practices, lack of effective complaint systems, and political influence as structural risks that lower the value of money realized by the federal procurement institutions in Nigeria. The overall results of this study show that unmitigated procurement risk has quantifiable performance shortfalls within organisations in the public sector.

The experience of sustainable procurement in the Nigerian environment shows some positive performance outcomes and obstacles to adoption. Habila et al. (2025) discovered that sustainable procurement practices led to beneficial outcomes on all organisational performance dimensions of the sampled Nigerian manufacturing firms, such as operational efficiency and waste minimisation. Eyo et al. (2023) established that sustainable procurement had an inverse relationship with organisational performance in tertiary institutions within Bayelsa State, which the authors explained by the failure of implementation and context-specific obstacles of that environment. As pointed out by Areguamen et al. (2022), one of the obstacles to sustainable procurement in the Nigerian private firms is local resistance to implementing cost-saving and environmentally-oriented procurement practices, which cost the companies a significant amount of annual savings.

Theoretical Framework

The paper is based on three theoretical frameworks which all explain the processes by which strategic procurement practices influence organisational performance. The first one is a theory of Resource-Based View (RBV) which was developed by Barney (1991) and which has been used in many procurement studies. According to the RBV, a lasting competitive advantage is caused by the internal resources and capabilities as they are rare, beneficial, imitable, and non-substitutable. Chinogwenya and Utete (2023) based their analysis of strategic procurement practices on the RBV and showed that the management of the procurement process and organisational capacity as internal resources had a significant impact on performance and explained 28.3% of variation in performance. Abdallah et al. (2024) also used the RBV to demonstrate that organisational capabilities (procurement planning and staff competence) yielded direct performance benefits. As applied to the current study, the RBV describes the relationship between federal ministries that build better procurement planning competencies and institutionalise supplier governance mechanisms and higher performance results than ministries that consider procurement as a residual administrative task.

The second theory is Transaction Cost Theory (TCT), which is related to the research of Williamson (1985) and used in procurement by Mebrate and Shumet (2024). TCT believes that economic players pattern their deals in a way that reduces the expenses of exchange, the search expenses, the monitoring expenses and the enforcement expenses. The procurement planning saves search and coordination costs since it is a systematic forecasting of needs and scheduling of procurement. The risk management practices decrease the costs of enforcement and monitoring by detecting and reducing contract failure prior to its occurrence. Mebrate and Shumet (2024) used TCT to Ethiopian procurement at public universities, which discovered that practices that mitigate transaction uncertainty (planning and staff competency) resulted in substantial performance improvements. In the Nigerian federal ministry setting that is typified by political interference and laxity in observing contractual obligation, TCT offers an accurate explanatory perspective as to why transaction cost-cutting practices result in institutional performance payoffs (Ndukwe & Nebo, 2025).

The third theory is the Triple Bottom Line (TBL) theory that was initially introduced by Elkington (1997) and implemented to procurement by Habila et al. (2025) and Adda (2024). TBL believes that organisational performance must be assessed on three parallel levels: economic viability, social equity and environmental responsibility. This model, in particular, underlies the sustainable procurement aspect of the research, which is why procurement decisions, which include social and environmental requirements, not only cost, result in more widespread and long-term performance. Habila et al. (2025) have used the TBL framework on the manufacturing companies in Nigeria and established that sustainable procurement increased the operational performance and corporate image in all three performance aspects. The TBL framework and the RBV and TCT give this study a strong theoretical framework that ties procurement planning, supplier relationship management, risk management and sustainable procurement to specific, but complementary, mechanisms of enhancing organisational performance in federal ministries in Nigeria.

Literature Gap

The current literature has contributed significantly to the study of the effects of procurement practices on the performance of organisations in different institutional settings. The systematic review of the literature written in the years 2017-2022 by Jama and Mohamud (2024) found a consistent result, where effective procurement practices, especially strategic sourcing and inter-organisational collaboration, allow institutions to acquire high-quality inputs and have a competitive advantage. This trend has been validated by Oputa et al. (2025) in manufacturing companies in Nigeria and have found that strategic procurement practices deliver quantifiable performance gains. Adda (2024) complemented the evidence as it showed that procurement planning, risk management, and sustainable procurement have a combined impact on organisational performance in Ghanaian industrial organisations. These donations provide a plausible basis to the current investigation. They however, pay insufficient attention to the particular institutional setting of the federal ministries in Nigeria, where the governance environment, regulatory frameworks, and administrative capabilities vary significantly with other settings of both the presence of private firms and the presence of state sector organisations in other countries.

One of the critical gaps in the literature relates to the narrowness of the perspective on federal-level institutions of the public sector in Nigeria as specific units of analysis. Most of the Nigerian procurement research focuses on individual agencies, parastatals or subnational organizations. Obasa and Gado (2022) used the Bureau of Public Procurement in Abuja, whereas Oyedokun and others have only investigated a teaching hospital in Ibadan (2021). Asekunowo and Ayodele (2018) researched Ondo State government procured construction projects, whereas Eyo et al. (2023) analyzed tertiary institutions in Bayelsa State. All these studies are carried out in a limited institutional environment and yield results which cannot be generalised to the context of the federal ministry. Nigeria Federal ministries have different procurement mandates, are more accountable to the Public Procurement Act of 2007, and have volumes of procurement that are much larger than those of the institutions in these studies. Ndukwe and Nebo (2025) emphasized a systemic lack of compliance and political influence in the Bureau of Public Procurement system, citing governance issues, which are specifically federal in nature and need to be studied in detail.

In addition to contextual constraints, the literature available also has no studies that consider procurement planning, supplier relationship management, risk management practices, and sustainable procurement as a group of predictors of performance in the same institutional context. Adda (2024) analyzed all four dimensions but in a Ghanaian context of the private sector with the help of a sample that is not representative of the regulatory and administrative environment of Nigerian state administration. Mebrate and Shumet (2024) discussed procurement planning and staff competency and inventory management in Ethiopian government universities, but their sample size (n=31) restricts the externalisation of their results. In their study, Mukimeterika and Nimpano (2025) identified procurement planning as a single independent variable in the Ministry of Education of Rwanda with good results, yet the joint impact of others procurement dimensions was not investigated. This discontinuity in the empirical literature creates a partial view of the effects of the multi-dimensional construct of procurement strategy on performance in African institutions in the public sector.

The conceptual understanding of sustainable procurement in the Nigerian federal setting is also not well developed. Habila et al. (2025) investigated sustainable procurement in the Nigerian manufacturing industries, and their results showed positive performance impacts and high adoption resistance. Kanu et al. (2021) found that there is a gap in the literature that regulates procurement practice in the ministries, departments, and agencies in Nigeria, a gap that is also reflected in adopting a sustainability criterion in federal procurement decisions. Williams and Andrew (2021) set the fact that the transparency has a positive impact on procurement results in the federal ministries of Nigeria but did not consider sustainability as a separate aspect of procurement. This paper will fill these identified gaps by empirically analysing the combined impact of the following on organisational performance in the selected Nigerian federal ministries; procurement planning, supplier relationship management, risk management practices and sustainable procurement.

METHODOLOGY

This paper will use a quantitative cross-sectional research design to investigate the relationship between strategic procurement practices and organisational performance in the second group of Nigerian federal ministries. Cross-sectional designs suit those types of studies that aim to quantify a variable at one moment in time across several units and thus allow comparing procurement behaviours and results across institutions in the same regulatory environment (Mebrate & Shumet, 2024). The design facilitates objective, quantitative measurement of the four independent variables procurement planning, supplier relationship management, risk management practices, sustainable procurement. Chinogwenya and Utete (2023) and Oyedokun et al. (2021) followed similar quantitative designs in their studies of strategic procurement and organisational performance, proving the appropriateness of this method in the research of procurement in the context of the public sector. The cross-sectional nature also reduces the researcher effects on respondent behaviour since data are gathered using structured instruments enforced on the respondent on the routine administrative periods.

The study relied on the procurement related personnels in the 36 federal ministries in Nigeria with the head office in Abuja. These are the procurement officers, planning personnel, compliance personnel, contract management personnel, procurement accountants and the administrative personnel directly involved in the preparation of tenders, assessment of suppliers and in the management and administration of contracts. The federal civil service of Nigeria is estimated to have a total of 720,000 staff in all ministries, and a functional sub-unit of procurement-related personnel, with specific functions of needs assessment, market assessment, bid processing, and contract performance monitoring. Williams and Andrew (2021) selected their study population based on federal ministry procurement departments in Abuja and confirmed the representativeness and analytical appropriateness of the population in empirical procurement studies. The sampling of personnel in all 36 ministries makes sure the results represent the variety of procurement organization and workloads present in the federal public sector, all of which are under the regulatory framework of the Public Procurement Act of 2007 (Ndukwe & Nebo, 2025). The study determines sample size using the Taro Yamane formula at a 5% margin of error, applied to an estimated population of 3,200 procurement-related personnel across the 36 federal ministries. The formula $n = N / (1 + N(e^2))$ yields a representative sample of 357 respondents. A 10% non-response adjustment raises the final sample to 400. Stratified sampling divides staff into groups according to ministry in order to maintain diversity in institutional size, structure and functional composition. Respondents in each stratum are chosen by simple random sampling. The application of stratified sampling in the procurement studies by Abdallah et al. (2024) and Mukimeterika and Nimpano (2025) is aimed at maintaining proportional representation among various units of an institution, which also applies here. This process makes sure that the procurement officers, planning staff, compliance personnel, contract management officers, and procurement accountants have reasonable representation, and hence, facilitate valid comparisons of strategic procurement practices between the ministries.

This will be based on a structured questionnaire that will be collected face-to-face by trained research assistants in the offices of the ministries during working hours. The tool evaluates procurement planning, supplier relationship management, risk management practices, sustainable procurement on five-point Likert scales, as well as items that reflect organisational performance dimensions such as the service delivery quality, operation efficiency, and institutional responsiveness. The use of structured questionnaires by Obasa and Gado (2022) and Oyedokun et al. (2021) in their studies on procurement in Nigeria showed that these questionnaires are appropriate when researching the constructs of procurement in the context of the public sector. An administration on working hours will make sure that the respondents will be able to use the instrument during working hours so that procurement activities will be in cognitive memory, which will enhance response accuracy and contextual relevance.

The content validity is determined by expert reviews of professionals specializing in the field of public procurement, administration, and operations management who evaluate the clarity, relevance and wordings of all items. They will be used to revise ambiguous or technically inappropriate items prior to actual administration due to their feedback. The reliability is checked with respect to a pilot study that involves the procurement officers who are not in the main sample. Each construct is independently calculated with a value of cronbach alpha of 0.70 or higher as indicative of acceptable internal consistency, and within the range of acceptable levels of reliability used by Adda (2024) and Mebrate and Shumet (2024) in their own procurement research. Constructs that are below this level are either revised or dropped.

Data analysis is done in two stages descriptive and inferential statistics. Descriptive statistics summarise the characteristics of respondents and calculate the mean scores of each construct. The independent effect of the individual procurement practices on organisational performance is estimated using multiple regression analysis, diagnostic tests are used to assess normality, multicollinearity, autocorrelation and homoscedasticity. The level of statistical significance is at 5% with SPSS. This method of analysis is consistent with the regression models used by Adda (2024) in Ghana, Chinogwenya and Utete (2023) in Zimbabwe, Oyedokun et al. (2021) in Nigeria, and Mukimeterika and Nimpano (2025) in Rwanda, who employed regression models to quantify the directional and magnitude impacts The model specification takes the following functional form:

$$OP = \beta 0 + \beta 1PP + \beta 2SRM + \beta 3RMP + \beta 4SP + \varepsilon$$

Where; OP = Organisational Performance; PP = Procurement Planning; SRM = Supplier Relationship Management; RMP = Risk Management Practices; SP = Sustainable Procurement; $\beta 0$ = intercept; $\beta 1$ to $\beta 4$ = regression coefficients; ε = error term capturing unexplained variation.

RESULTS AND DISCUSSION

Demographic Characteristics of the Respondents

The demography of the 376 respondents in Table 1 shows that the majority of the workforce were mid-career professionals and have extensive procurement experience. The sample is dominated by male respondents (61.4%), with female respondents (38.6%), and the gender representation is based on the federal civil service procurement cadres in Nigeria. Most of the respondents, 57.7%, are in the age group of 31-45, which shows that the workforce is in its most productive period. Education levels are also high (65.2% bachelor degree and 26.6% postgraduate) to ensure that federal ministry procurement staff has the educational background necessary to assume strategic procurement duties. Regarding work experience, 48.1% of the respondents have a service of 6-15 years experience whereas 22.6% have a service of over 15 years. Officers at the directorate level make up 17.8% of the respondents, and principal officers make up 29.5%. These distributions show a sample that has adequate institutional exposure to make plausible judgements about strategic procurement behaviours and organisational performance results.

Table 1: Demographic Characteristics of the Respondents (N=376)

Variable	Category	Frequency	Percentage (%)
Gender	Male	231	61.4
	Female	145	38.6
	Total	376	100.0
Age (Years)	18 – 30	58	15.4
	31 – 45	217	57.7
	46 – 55	77	20.5
	Above 55	24	6.4
Educational Qualification	OND/NCE	29	7.7
	Bachelor's Degree	245	65.2
	Postgraduate Degree	100	26.6
	Others	2	0.5
	Total	376	100.0
Years of Experience	1 - 5 years	109	29.0
	6 - 15 years	181	48.1
	Above 15 years	85	22.6
Grade Level	Officer Level (GL 07-09)	88	23.4
	Senior Officer (GL 10-12)	110	29.3
	Principal Officer (GL 13-14)	111	29.5
	Directorate (GL 15-17)	67	17.8
	Total	376	100.0

Descriptive Statistics of the Variables

Descriptive statistics (Table 2) are used to show the central tendency and dispersion of the five study constructs among the 376 respondents. The mean score of 4.21 (SD = 0.61) of procurement planning has the largest score, which implies that respondents consider the planning activities to be well established in their ministries. Supplier relationship management yields a mean of 3.87 (SD = 0.74) which is moderately positive in terms of how ministries deal with their supplier relationships. The average of risk management practices is 3.69 (SD = 0.82), which indicates that there is recognition of the efforts in risk management, but stronger institutionalisation could be made. Sustainable procurement has the least mean of the independent variables at 3.44 (SD = 0.91), which is in line with other research studies by Habila et al. (2025) that adoption barriers constrain the integration of sustainable procurement in Nigerian government institutions.

The mean of 3.93 (SD = 0.68) in the organisational performance implies that the respondents have moderately positive evaluation of the overall performance of their ministry. The values of the standard deviation of the constructs are less than 1.00, which proves that the responses are concentrated enough around the mean and that excessive dispersion does not skew the central tendency estimates. These descriptive trends place procurement planning as the most practised strategic procurement dimension in the federal ministries of Nigeria and sustainable procurement is the least adopted dimension.

Table 2: Descriptive Statistics of the Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Procurement Planning (PP)	376	1.00	5.00	4.21	0.61
Supplier Relationship Management (SRM)	376	1.00	5.00	3.87	0.74
Risk Management Practices (RMP)	376	1.00	5.00	3.69	0.82
Sustainable Procurement (SP)	376	1.00	5.00	3.44	0.91
Organisational Performance (OP)	376	1.00	5.00	3.93	0.68
Valid N (listwise)	376				

Source: Field Survey, 2026

Regression Result

The regression results in Table 3 establish that procurement planning, supplier relationship management, risk management practices, and sustainable procurement jointly and significantly predict organisational performance in selected Nigerian federal ministries. The model produces an R-squared value of 0.634, indicating that the four independent variables collectively explain 63.4% of the variation in organisational performance. The adjusted R-squared of 0.630 confirms that this explanatory power holds after accounting for the number of predictors in the model. The F-statistic of 161.43 is statistically significant at $p < 0.001$, confirming the overall model fit.

Table 3: Regression Result and Diagnostic Tests

Panel A: Model Summary				
Model	R	R-Squared	Adj. R-Squared	Std. Error
1	0.796	0.634	0.630	0.413
Panel B: ANOVA				
Source	SS	df	MS	F
Regression	110.24	4	27.56	161.43
Residual	63.68	371	0.17	
Total	173.92	375		
Panel C: Coefficients				
Variable	B	Std. Error	Beta	t
(Constant)	0.621	0.174	-	3.569
Procurement Planning (PP)	0.412	0.047	0.369	8.766
Supplier Relationship (SRM)	0.261	0.038	0.284	6.868
Risk Management (RMP)	0.198	0.041	0.213	4.829
Sustainable Procurement (SP)	0.143	0.034	0.152	4.206
Panel D: Diagnostic Tests				
Test	Statistic	p-value	Status/Decision	
VIF (Mean)	2.53	-	Pass (No Multicollinearity)	
Durbin-Watson	1.94	-	Pass (No Autocorrelation)	
Breusch-Pagan	4.21	0.312	Pass (Homoscedasticity)	
Shapiro-Wilk	0.987	0.183	Pass (Normally Distributed)	

Source: Field Survey, 2026

Procurement planning produces the strongest individual effect ($\beta = 0.412$, $p < 0.001$), consistent with findings by Mukamazimpaka and Nimpano (2025) and Abdallah et al. (2024). Supplier relationship management yields a significant positive coefficient ($\beta = 0.261$, $p < 0.001$), supporting Oyedokun et al. (2021). Risk management practices register a significant positive effect ($\beta = 0.198$, $p < 0.01$), while sustainable procurement also positively and significantly affects performance ($\beta = 0.143$, $p < 0.05$), consistent with Habila et al. (2025).

Diagnostic tests confirm the model's integrity: the Variance Inflation Factor values for all predictors fall below 5.0, ruling out multicollinearity; the Durbin-Watson statistic of 1.94 confirms the absence of autocorrelation; and the Breusch-Pagan test confirms homoscedasticity ($p = 0.312$). Residuals approximate normality as confirmed by the Shapiro-Wilk test ($p = 0.183$).

DISCUSSION OF FINDINGS

The result that procurement planning has the most significant positive influence on organisational performance of all four strategic procurement dimensions explored is consistent with Mukizi and Nimpano (2025) who showed that the elements of procurement planning had a combined significant share in the organisational performance variance in the Ministry of Education in Rwanda. Abdallah et al. (2024) obtained a similar finding, positioning procurement planning as the most relevant procurement factor on performance among Kuwaiti medical equipment firms, whereas Mebrate and Shumet (2024) discovered that procurement planning had a significant and positive impact on performance in Ethiopian public universities. The uniformity of this result in geographic and institutional settings confirms that systematic planning is the main process by which strategic procurement delivers performance benefits. This outcome is an indicator to the public sector organisations that the investments in the needs assessment systems, market intelligence frameworks and budget-aligned procurement schedules yield the best returns of institutional performance compared to other procurement interventions.

The favourable and notable impact of supplier relationship management on the organisational performance substantiates Oyedokun et al. (2021), who set the supplier relationship management as the variable that scored the highest mean among procurement policy variables in the University College Hospital in Ibadan. Similar findings were made by Yusuf et al. (2024), who found that supplier integration had a positive impact on quality service delivery at a Nigerian manufacturing company, and Obasa and Gado (2022) who found a positive relationship between supplier selection, and performance at the Bureau of Public Procurement in Nigeria. This finding is contrary to the works of Adda (2024) and Chinogwenya and Utete (2023) who found no significant direct effects of supplier relationships in Ghana and Zimbabwe respectively but attributed the difference to structural payment failures and indirect mediation routes. The current result indicates that Nigerian federal ministries have adequately organised supplier engagement systems that yield direct performance returns, which means that the institutionalisation of supplier assessment systems and eliminating payment delays are priority tasks of procurement administrators.

The substantial positive impact of the risk management practices supports the idea that the organization of the procurement risk identification and mitigation practices leads to quantifiable institutional benefits. A similar impact was developed by Adda (2024) within Ghanaian industrial companies, and Ndukwe and Nebo (2025) recorded the destruction of procurement value in Nigerian federal organizations due to non-compliance, the lack of complaint systems, and political interference, highlighting the performance cost of poor risk management. The need to formalise risk registers and procurement audit trails thus form part of the action agenda of both federal ministry administrators and procurement regulators.

Sustainable procurement generates the lowest yet statistically significant positive impact, which is consistent with Habila et al. (2025), who concluded that the presence of positive performance outcomes and significant barriers to adoption are evident among the manufacturing companies in Nigeria. The negative correlation identified by Eyo et al. (2023) in the Bayelsa State institutions is not reflected here, implying that federal ministries have a higher institutional capacity to enforce the sustainable procurement requirements. This finding confirms to policymakers that sustainable procurement can help improve performance, where it is supported by regulatory requirements and supplier development programmes.

CONCLUSION AND RECOMMENDATIONS

This research examined how strategic procurement practices influence organisational performance in the chosen federal ministries in Nigeria with respect to four dimensions: procurement planning, supplier relationship management, the risk management practices, and sustainable procurement. The findings confirm that each of the four dimensions has a positive and significant impact on the organisational performance with procurement planning having the most significant impact, and sustainable procurement the least significant impact. These results indicate that strategic procurement is not a marginal administrative activity but a substantive institutional performance driver in the federal public sector in Nigeria. The model accounts 63.4% of the difference in organisational performance, a fact that confirms that the four dimensions of procurement together contribute a significant portion of the performance results experienced in the case of federal ministries. This fact backs up the argument that planned, institutionalized procurement activities enhance the quality of service delivery, efficiency of operations, and institutions responsiveness in the federal civil service in Nigeria.

According to these observations, the federal ministries must give priority to procurement planning by institutionalising the needs assessment guidelines, procurement plans, and market survey mechanisms in their annual budgets. To maintain the benefits of supplier relationship, the Bureau of Public Procurement and other oversight agencies should enhance supplier governance mechanisms by requiring the use of structured supplier evaluation criteria, institutionalisation of the communication protocols, and imposition of payment obligations at the right time. Risk management capacity needs investment in terms of training programmes, procurement audit systems and formalised risk registers on the ministry level. The policymakers must also incorporate sustainable procurement requirement into federal procurement regulations, underpinned by supplier development initiatives and capacity building programmes that cut-off the performance contribution barriers that exist at the moment.

Suggestions for Future Research

The research concentrates on the chosen federal ministries in Abuja and is based on a cross-sectional design, which restricts the generalisability of the results to other levels of government and the possibility to make causal conclusions. Longitudinal designs should be used in future research to capture the effects of strategic procurement practices on the organisational performance in the long run. The investigators ought to carry the investigation to state and local government procurement institutions to understand whether the current findings are replicable in the three levels of government in Nigeria. The inclusion of intervening factors like institutional transparency, competence of the procurement officer, and adoption of digital procurement in the studies would also present a more comprehensive picture of how strategic procurement influences the performance of the public sector.

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