


RISK MANAGEMENT STRATEGIES AND SUPPLIER SELECTION IN PUBLIC SECTOR PROCUREMENT: EVIDENCE FROM THE LOWER BENUE RIVER BASIN DEVELOPMENT AUTHORITY, NIGERIA

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ABSTRACT

This study investigates the effect of risk management strategies - specifically risk retention and risk sharing - on supplier selection in the Lower Benue River Basin Development Authority (LBRBDA), Makurdi. Motivated by the growing emphasis on effective supplier selection in public procurement and the need to mitigate procurement-related risks, the study adopts a correlational survey design. A census approach was employed due to the manageable population size (N = 101), with 86 valid responses received, representing an 85.1% response rate. Data were collected using structured questionnaires and analyzed using descriptive statistics and multiple regression analysis. Findings reveal that both risk retention and risk sharing significantly influence supplier selection, with risk sharing having a more pronounced impact. The results highlight the importance of adopting a strategic and collaborative approach to risk management in public procurement. It is concluded that while risk retention facilitates internal operational flexibility, risk sharing enhances trust and supplier performance. The study recommends institutionalizing risk-sharing practices and applying risk retention selectively within a comprehensive risk governance framework.

Keywords: Risk management, Risk retention, Risk sharing, Supplier selection, Public procurement.

Edited in English.

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1 INTRODUCTION

1.1 Background of the Study

Risk management strategies have become central to procurement processes, especially in public infrastructure projects where supplier reliability, accountability, and regulatory compliance are critical. Public procuring entities operate in environments characterized by uncertainty, information asymmetry, and opportunistic supplier behavior, making the management of procurement-related risks a strategic necessity. Among the various risk management approaches, organizations may choose to avoid, mitigate, transfer, retain, or share risks depending on institutional capacity, project characteristics, and governance structures.

This study focuses specifically on risk retention and risk sharing because these two strategies are particularly relevant in public-sector procurement contexts where full risk transfer or avoidance is often impractical. Risk retention reflects an organization's internal capacity to absorb and manage predictable or low-impact risks through contingency planning and internal controls, while risk sharing emphasizes collaborative governance arrangements in which procurement risks are jointly allocated between buyers and suppliers. Unlike risk avoidance or full risk transfer, which may limit supplier participation or inflate procurement costs, risk retention and risk sharing directly shape supplier behavior, incentives, and accountability within contractual relationships.

Globally, leading organizations are embedding these two strategies into supplier evaluation and governance frameworks. In the United States, firms such as Lockheed Martin employ structured risk-sharing mechanisms, including performance-based contracts and collaborative agreements, to promote supplier accountability and ethical compliance (Defense Business Board, 2025). In Asia, integrated procurement models emphasize shared responsibility between buyers and suppliers to sustain performance consistency in long-term projects (Ram & Zhang, 2020). Risk retention, as explained by Mutenga and Staikouras (2007), is commonly applied where risks are predictable and manageable, supported by internal controls and contingency planning (Usman et al., 2024).

In the Nigerian public-sector context, procurement continues to face challenges such as weak enforcement of ethical standards, supplier inconsistency, bureaucratic delays, and institutional capacity constraints. The Lower Benue River Basin Development Authority (LBRBDA), for instance, has experienced delays and cost overruns linked to supplier non-compliance and historical underperformance. Recent empirical evidence from the LBRBDA context further underscores the importance of risk management strategies in procurement outcomes. For instance, Tyozenda et al. (2025) found that risk management strategies significantly influence supplier selection decisions within the Authority, highlighting the need for more refined analysis of specific strategies such as risk retention and risk sharing. Although the Public Procurement Act of 2007 provides a legal framework for accountability, its implementation remains uneven (Essien et al., 2018). In such settings, risk retention and risk sharing become particularly salient strategies because they represent realistic governance choices available to public agencies operating under fiscal, legal, and institutional constraints.

Accordingly, this study examines how risk retention and risk sharing, as selected dimensions of risk management, influence supplier selection outcomes at LBRBDA. By focusing on these two strategies, the study provides empirical insight into how public procuring entities can balance internal risk absorption and collaborative risk allocation to improve supplier selection, accountability, and compliance with regulatory and ethical standards in Nigeria's public sector.

1.2 Statement of the Problem

Incorporating effective risk management strategies, particularly risk sharing and risk retention, is vital to enhancing supplier accountability and compliance within public procurement systems. These strategies enable organizations to manage uncertainties associated with supplier behavior, contract performance, and regulatory adherence. Ideally, risk sharing mechanisms, such as long-term contracts or public-private partnerships, promote mutual accountability and foster ethical supplier conduct. Conversely, risk retention requires internal preparedness to absorb manageable risks while still ensuring suppliers perform consistently over time. These strategies are especially critical for agencies like the LBRBDA, where procurement processes must balance risk ownership with the need for compliance and performance assurance.

However, the implementation of these two strategies at LBRBDA remains inadequate. The authority often lacks structured mechanisms to equitably distribute risks with suppliers or absorb them internally without compromising project goals. As a result, supplier past performance records show inconsistencies, and there are recurring concerns about non-compliance with regulatory and ethical standards, exposing the agency to reputational, financial, and legal risks. Although prior work (Tyozenda et al., 2025) established a general relationship between risk management strategies and supplier selection at LBRBDA, it did not explicitly disaggregate the effects of specific strategies such as risk retention and risk sharing on supplier compliance and performance outcomes. This creates a gap in understanding the mechanisms through which these strategies influence procurement effectiveness. This gap in contextual and analytical specificity is further compounded by a limited number of empirical studies exploring how risk sharing and risk retention affect supplier outcomes in Nigeria's public sector. Existing literature (e.g., Essien et al., 2018; Gurtu & Johny, 2021; Manavalan & Jayakrishna, 2019) acknowledges the importance of risk management in supplier selection, but rarely addresses its nuanced application in under-institutionalized settings like LBRBDA. This study fills this gap by examining the effects of risk sharing and risk retention strategies on supplier past performance and compliance with regulatory and ethical standards.

1.3 Objectives of the Study

The main objective of this study is to investigate the effect of selected risk management strategies specifically risk retention and risk sharing, on supplier outcomes in the Lower Benue River Basin Development Authority (LBRBDA), Makurdi. The specific objectives are to:

- i.** ascertain the effect of risk retention on supplier selection in LBRBDA, Makurdi;
- ii.** examines the effect of risk sharing on supplier selection in LBRBDA, Makurdi.

2 LITERATURE REVIEW

2.1 Theoretical Framework

This study is grounded in the Transaction Cost Economics (TCE) and Resource-Based View (RBV) theories. These theories provide a dual perspective on how organizations manage risks in supplier selection, particularly focusing on risk retention and risk sharing strategies. TCE is adopted as the primary theoretical foundation because of its strong alignment with the study's risk-centered objectives.

The TCE theory, developed by Williamson (1975, 1981), explains how firms aim to minimize the costs of economic exchanges - such as search, monitoring, and enforcement costs - especially under conditions of uncertainty, asset specificity, and bounded rationality. TCE offers clear insights into how procurement-related risks can be managed through structured governance mechanisms. In the context of the LBRBDA, TCE helps to explain how decisions to retain or share

procurement risks shape supplier selection. For instance, when LBRBDA chooses to retain risk, it absorbs potential uncertainties internally and thus favors suppliers with a high degree of reliability and capability. On the other hand, when the authority opts for risk sharing, it engages in collaborative relationships or long-term contracts where both parties bear specific risks - often through negotiated agreements or performance-based contracts. TCE has evolved through contributions from scholars such as Poppo and Zenger (2002), who highlighted relational governance as a complement to traditional contracting, and David and Han (2004), who emphasized behavioral uncertainty in supplier behavior. Despite critiques, including Ghoshal and Moran's (1996) argument that TCE overly emphasizes cost at the expense of strategic collaboration, the theory remains relevant in contexts like public procurement where managing transactional uncertainty is critical.

Complementing TCE, the RBV of the firm, proposed by Barney (1991), emphasizes the role of unique and valuable resources in creating a competitive advantage. Within supplier selection, RBV helps LBRBDA identify suppliers with distinctive capabilities - such as financial strength, regulatory compliance, or technological infrastructure - that can support either a risk retention or a risk-sharing approach. Peteraf (1993) and Teece et al. (1997) extended the RBV by emphasizing the importance of sustained competitive advantage and dynamic capabilities, particularly in responding to changing procurement environments. Although RBV does not directly address transactional risks, it enhances understanding of why certain suppliers are selected based on their internal capabilities to manage retained risks or to contribute effectively to shared risk models. Nonetheless, RBV's internal focus and limited attention to external uncertainties (Priem & Butler, 2001) make it less suitable as a primary framework for studies focused on procurement risk.

While both TCE and RBV offer valuable insights, TCE more directly supports this study's examination of risk retention and risk sharing in supplier selection. Its emphasis on uncertainty, opportunism, and governance structures provides a stronger theoretical basis for analyzing how LBRBDA manages procurement risks through its supplier selection strategies.

Despite the extensive application of TCE and related theories in procurement research, important theoretical ambiguities remain regarding how specific risk management strategies influence supplier selection outcomes, particularly in public-sector contexts. While some studies suggest that risk retention enhances control and learning, others caution that excessive internalization of risk may weaken supplier discipline and accountability. Similarly, risk sharing is theorized to improve collaboration and alignment of incentives, yet the literature also highlights concerns about moral hazard, opportunism, and unclear responsibility allocation when risks are jointly borne. Building on Khan and Burnes (2007), supply chain risk research still shows limited integration between risk management theory and supplier relationship decision-making, creating uncertainty about how risk strategies translate into performance and compliance outcomes. This unresolved theoretical tension suggests that the effects of risk retention and risk sharing on supplier selection are not universally predictable but context-dependent, warranting empirical investigation in institutionally constrained public-sector environments such as the LBRBDA.

2.1.1 Risk Management Strategies

Risk management strategies refer to the deliberate and structured processes through which organizations identify, assess, and address risks that may interfere with the achievement of objectives. Scholars like Kaplan and Mikes (2020) emphasize that these strategies are proactive frameworks aimed at mitigating threats before they materialize. Hopkin (2018) adds that risk management must be coordinated across all organizational units to ensure cohesion and avoid fragmented responses. The aim is not just to minimize threats but to enhance resilience and operational efficiency. Chinogwenya and Utete (2023) argue for a strategic alignment between

risk responses and organizational goals, while Aven (2016) stresses the importance of reducing the likelihood or impact of adverse events. Bracci et al. (2024) extend the discussion by linking risk management directly to performance optimization, showing that effective strategies do more than protect - they enhance decision-making and outcomes. Within supply chain management, Sodhi and Chopra (2004) provide a foundational taxonomy of risk mitigation strategies, distinguishing among risk retention, risk transfer, and risk reduction, and argue that the choice among these strategies fundamentally shapes supply chain resilience and decision-making. This taxonomy situates risk retention and risk sharing as deliberate governance choices rather than residual or reactive responses to uncertainty.

In the context of public sector institutions like the LBRBDA, risk management strategies are crucial in managing procurement and supplier-related uncertainties. Agencies in the water resources sector face challenges such as environmental volatility, regulatory delays, funding limitations, and supplier non-performance. Strategies such as risk retention, and risk sharing are deployed to navigate these complexities (Cervitude, 2024; Patsanza, 2019). However, implementation remains problematic due to unpredictable weather conditions, weak regulatory enforcement, and poor integration of risk responses into procurement planning (IPCC, 2022; Chowdhury, 2025; Osei-Kyei & Chan, 2016). Still, when implemented effectively, these strategies improve supplier performance, reduce losses, and support regulatory compliance (Osei-Kyei & Chan, 2016). Thus, risk management is not only defensive but a strategic enabler of effective supplier selection in the LBRBDA.

2.1.2 Dimensions of Risk Management Strategies

i. Risk Retention

Risk retention entails an organization's choice to accept and manage certain risks internally, rather than transferring them to third parties. Bromiley et al. (2015) present this as the conscious decision to live with manageable risks inherent in operations. Colivicchi et al. (2024) argues that such decisions often stem from cost-benefit analysis, where internal management is deemed more efficient or cost-effective than outsourcing the risk. Hopkin (2018) extends this idea by emphasizing the role of internal monitoring systems, suggesting that effective risk retention is not passive but involves active control and contingency measures. In procurement, particularly at LBRBDA, risk retention may take the form of budgetary buffers to address minor supplier delays or internal audits to address quality inconsistencies.

At LBRBDA, retaining certain supplier risks may be necessary due to budgetary constraints or the unavailability of effective third-party risk mitigation mechanisms. For example, when dealing with smaller contracts or recurring operational procurement, it may be more pragmatic to handle supplier delays or performance lapses internally. However, the success of this strategy depends on the agency's ability to implement strong internal oversight and risk response mechanisms. Retained risks that are not adequately monitored can escalate into major procurement setbacks. Therefore, effective risk retention at LBRBDA requires not only the willingness to absorb risk but also institutional capability to respond swiftly when such risks manifest.

ii. Risk Sharing

Risk sharing, on the other hand, involves distributing risk responsibilities among multiple project participants to reduce the burden on any single entity. Kaplan and Mikes (2016) define this as collaborative resilience, where different stakeholders pool their capacities to absorb uncertainties. Aven (2016) reinforces this view by presenting risk sharing as a model of distributed accountability, often practiced through contractual agreements or joint ventures. In procurement, this could involve shared delivery obligations, co-funding arrangements, or performance-based incentives that tie supplier success to client collaboration. Such models align with Nigeria's

Infrastructure Concession Regulatory Commission (ICRC) framework, which guides Private Public Partnerships (PPPs) and encourages collaborative risk governance

At LBRBDA, risk sharing can be particularly beneficial in high-value or technically complex procurement projects. For example, in large-scale irrigation infrastructure projects, suppliers and the authority can share risks related to material delivery timelines, environmental compliance, or cost overruns. By aligning incentives and obligations, both parties are more committed to successful project execution. However, this approach requires clear legal frameworks and mutual trust - factors that are not always guaranteed in the Nigerian public procurement context. Nonetheless, when effectively applied, risk sharing enhances transparency, encourages innovation, and distributes liabilities in ways that safeguard public interest and improve supplier performance.

From a contract theory perspective, Bajari and Tadelis (2001) demonstrate that the allocation of risks between contracting parties depends on trade-offs between incentive efficiency and transaction costs. Their analysis of fixed-price versus cost-reimbursement contracts shows that risk-sharing arrangements are particularly valuable in environments characterized by uncertainty and incomplete contracts - conditions common in public procurement. This perspective reinforces the relevance of risk sharing in supplier selection, as procuring entities may prefer suppliers capable of operating under shared-risk contractual structures that balance accountability with flexibility.

2.1.3 *Supplier Selection*

Supplier selection is a fundamental component of procurement that significantly impacts an organization's supply chain efficiency, project delivery success, and long-term operational stability. The process involves evaluating potential suppliers not only on cost considerations but on a range of critical performance and compliance indicators. Supplier selection is increasingly viewed as a strategic function that requires balancing trade-offs between supplier capability, past performance, financial soundness, delivery reliability, and risk exposure. As supply chains grow more complex and sensitive to global disruptions, organizations have shifted from transactional to performance- and risk-based models for selecting suppliers. Models like Multi-Criteria Decision-Making (MCDM), including AHP and TOPSIS (Wind & Saaty, 1980), help procurement professionals evaluate suppliers across several weighted criteria, making the selection process more structured and data-driven. Similarly, the Total Cost of Ownership (TCO) model explicitly framed by Panjaitan et al. (2024) encourages firms to look beyond immediate pricing and consider downstream costs like operations and maintenance, making long-term sustainability a key procurement goal.

However, for institutions such as the LBRBDA, where projects often encounter procurement vulnerabilities, adopting a risk-based lens in supplier selection becomes crucial. The Risk-Based Supplier Selection model, as described by Ho et al. (2010) and further developed by Tummala and Schoenherr (2011), provides a robust framework that integrates risk mitigation into the supplier evaluation process. This approach evaluates both supplier qualifications and their capacity to withstand external shocks, comply with regulatory standards, and demonstrate reliability in volatile conditions. By aligning supplier selection with risk management practices, the organization minimizes potential supply chain failures and enhances project outcomes. The model supports the specific variables adopted in this study - supplier capacity, supplier past performance, supplier risk exposure, and supplier compliance with regulatory and ethical standards - thereby ensuring that procurement is not just efficient but also resilient. This perspective is particularly relevant to public infrastructure projects, where supplier deficiencies often result in cost overruns, delays, or regulatory breaches. Thus, effective supplier selection,

rooted in a risk-aware methodology, plays a vital role in safeguarding public investments and maintaining institutional credibility.

Linking risk management theory to supplier selection, Khan and Burnes (2007) argue that traditional supplier evaluation models often underestimate risk-related factors, calling for integrated frameworks that explicitly incorporate risk exposure, governance mechanisms, and relational dynamics. Their work highlights the need to understand supplier selection not merely as a cost-optimization exercise but as a strategic risk management decision. This study aligns with that agenda by empirically examining how risk retention and risk sharing shape supplier selection outcomes in a public-sector context.

2.1.4 Dimensions of Supplier Selection

An effective supplier selection process relies on evaluating multiple dimensions that contribute to procurement success, particularly in public-sector projects where accountability and sustainability are paramount. One of the most predictive indicators of a supplier's future behavior is their past performance. Ondieki et al. (2023) identifies this as a critical factor, arguing that historical compliance with contracts and delivery expectations directly influences future reliability. This foundational view is supported by Ho et al. (2010), who highlight the importance of multiple performance criteria, including past performance, quality, and delivery reliability in supplier evaluation. Going beyond compliance, Matas et al. (2024) emphasize the value of resilience, noting that a supplier's ability to maintain consistency and respond effectively during disruptions reflects a deeper layer of dependability. Carr and Pearson (1999), as affirmed by Maganga et al. (2024), add that past performance should also account for responsiveness to buyer needs, as suppliers who cannot adapt may become unreliable even if their historical record is strong. Bringing these perspectives together, this study defines supplier past performance as a supplier's historical track record in maintaining quality, fulfilling orders punctually, and demonstrating adaptability in procurement relationships, consistent with the emphasis on consistency and resilience highlighted by Matas et al. (2024).

Lastly, supplier compliance with regulatory and ethical standards is essential in ensuring responsible procurement, particularly in public-sector contexts where transparency, accountability, and sustainability are central concerns. Although LBRBDA and Tanzanian contexts differ, Harun et al. (2025) empirically demonstrates how compliance in procurement is driven by institutional culture, enforcement mechanisms, and ethical conduct, aligning closely with modern conceptualizations of supplier compliance. Expanding this definition, Vandenbroucke et al. (2024) argue that compliance also involves adherence to broader corporate social responsibility (CSR) norms, such as labor rights and environmental governance. Wilhelm (2024) link supplier compliance to responsible sourcing, thereby positioning it as a key component of corporate accountability. Accordingly, this study defines supplier compliance as the supplier's adherence to legal, ethical, and industry-specific standards to ensure sustainable and responsible procurement practices, consistent with Harun et al. (2025). In public-sector procurement, regulatory and ethical compliance mitigates governance risks and upholds institutional credibility.

2.2 Empirical review

In the Nigerian public-sector context, Tyozenda et al. (2025) examined the effect of risk management strategies on supplier selection at the LBRBDA and found a significant positive relationship between structured risk management policies and supplier selection outcomes. However, their study treated risk management strategies in aggregate form, leaving room for further investigation into how individual strategies such as risk retention and risk sharing uniquely affect supplier performance and compliance. Recent scholarship has increasingly emphasized the strategic importance of risk management approaches - particularly risk retention and risk sharing

- in enhancing organizational performance and procurement outcomes. Usman et al. (2024), in a study examining risk retention strategies among insurance companies in Nigeria, identified a positive relationship between internal risk retention and financial performance. Their findings underscore the role of deliberate risk absorption in improving capital utilization and organizational resilience. While the study was situated within the insurance sector, the implications are transferable to public procurement. Institutions such as LBRBDA may benefit from integrating suppliers' risk retention capabilities into their selection criteria to promote procurement efficiency and reliability. In a similar context, Mumassabba et al. (2022) investigated the impact of risk retention on the competitiveness of small and medium enterprises (SMEs) in Kenya. The study found that SMEs that actively internalized operational risks experienced improved strategic agility and decision-making, particularly under volatile conditions. Although not procurement-specific, these insights support the inclusion of risk-aware supplier profiling in public procurement processes, particularly in risk-prone sectors. Further contributing to this discourse, Ghadge et al. (2017) explored the use of risk-sharing contracts as a supply chain risk mitigation strategy. Focusing on buyer-supplier dynamics in the automotive sector, the study demonstrated how shared responsibility frameworks can stabilize supply chains, foster long-term collaboration, and mitigate disruptions linked to demand uncertainty. The findings highlight the relevance of balanced power relationships and mutual accountability in risk-laden procurement environments, offering a model that public sector agencies could adopt to enhance supplier engagement and performance. Mwalukasa and Sallwa (2024) extended this line of inquiry by examining the effect of procurement risk strategies on public sector performance in Tanzania. Their findings confirmed the positive influence of risk-sharing arrangements on procurement outcomes, including improved contractor reliability and reduced project disruptions. The study provides empirical grounding for integrating collaborative risk-sharing provisions into procurement contracts in agencies such as the LBRBDA, especially in sectors vulnerable to funding volatility and operational setbacks. Paraskeva and Tsoulfas (2025) added a broader regional perspective by analyzing risk-sharing mechanisms within public procurement systems across the European Union. Their results emphasized that equitable allocation of risks - through mechanisms like inflation adjustment and flexible contract terms - enhanced supplier participation and procurement performance. The study cautioned against unilateral risk transfer to contractors, noting its detrimental effects on project delivery and supplier retention. These insights are particularly instructive for public procurement agencies in Sub-Saharan Africa, where political and economic uncertainties often exacerbate supplier risk exposure.

2.3 Research Hypotheses

H₁: Risk retention has a positive and statistically significant effect on supplier selection in the Lower Benue River Basin Development Authority (LBRBDA).

H₂: Risk sharing has a positive and statistically significant effect on supplier selection in the Lower Benue River Basin Development Authority (LBRBDA).

3 METHODOLOGY

The methodology of this study outlines a structured framework for assessing the effect of risk management strategies on supplier selection at the LBRBDA. The study adopted a correlational survey design, which was suitable for establishing the relationships between multiple risk strategies - namely, risk avoidance, risk mitigation, risk transfer, risk retention, and risk sharing - and supplier selection outcomes. These outcomes include supplier capacity, past performance, and compliance with regulatory and ethical standards. A total population of 101 stakeholders involved in procurement activities at LBRBDA was surveyed using a census

approach, ensuring that all relevant actors such as procurement officers, risk managers, project managers, suppliers, and unit heads were included. Out of a total of 101 copies of questionnaire distributed across procurement-related stakeholders at the LBRBDA, 86 were successfully retrieved, representing an overall response rate of 85.1 %, which is considered adequate for statistical analysis in organizational research. Data collection was executed using a structured questionnaire divided into demographic and objective-based sections, with items designed on a five-point Likert scale. To validate the instrument, both face/content validation and factor analysis were employed, with the Kaiser-Meyer-Olkin (KMO) value at 0.932 and Bartlett’s Test of Sphericity significant at $p < 0.000$, confirming sampling adequacy and inter-item correlation. Reliability was confirmed using Cronbach’s alpha, with coefficients for all constructs ranging between 0.781 and 0.877, indicating high internal consistency and measurement precision.

For analytical procedures, data were analyzed using descriptive and inferential statistics. Descriptive statistics helped in summarizing demographic characteristics and respondents’ perceptions of the constructs. The main inferential tool was multiple linear regression, employed to estimate the effect of each risk management strategy - particularly risk retention and risk sharing - on supplier selection. The regression model is expressed as: $SS = \alpha + \beta_1RR + \beta_2RS + e$,

Where SS = supplier selection, RR = risk retention, RS = risk sharing, e = error term and α = constant. It was hypothesized a priori that all coefficients (β_1 and β_2) would be positive, indicating that each risk strategy is expected to enhance supplier selection. The model’s outcomes were interpreted using p-values and t-values at a 5% significance level, with a decision rule: if $p < 0.05$ and $t > 1.96$, the null hypothesis is rejected, confirming a statistically significant relationship between the predictor and supplier selection. This methodological approach ensures robust evaluation of how specific risk strategies influence effective supplier selection within a public-sector procurement context. All analyses were conducted using SPSS version 25.

4 RESULT AND DISCUSSION

4.1 Descriptive Analysis of Respondents and Study Variables

Table 1 summarizes the demographic characteristics of the 86 valid respondents, covering age, educational attainment, and years of professional experience. Although these variables were not included as explanatory factors in the empirical models, their presentation provides important contextual insight into the profile and competence of the respondents whose perceptions underpin the study’s findings.

Table 1
Demographic Attributes of Respondents

Attributes	Frequency	Percentage (%)
Age		
18–27 years	8	9.3
28–37 years	23	26.7
38–47 years	36	41.9
48 years and above	19	22.1
Total	86	100
Educational Attainment		

SSCE	0	0.0
OND/NCE	11	12.8
HND/Degree	48	55.8
Postgraduate Degrees	27	31.4
Total	86	100
Experience		
1–10 years	21	24.4
11–20 years	22	25.6
21–30 years	29	33.7
31 years & above	14	16.3
Total	86	100

Source: Field Survey, 2025.

The age distribution indicates that the majority of respondents were within the economically active and professionally mature age brackets. Respondents aged 38–47 years constituted the largest group (41.9%), followed by those aged 28–37 years (26.7%). Participants aged 48 years and above accounted for 22.1%, while the youngest category (18–27 years) represented only 9.3% of the sample. This distribution suggests that the data were largely drawn from individuals with substantial professional exposure and decision-making experience in procurement-related activities, which is particularly relevant for a study focusing on risk management and supplier selection.

In terms of educational attainment, the respondent pool was highly educated. A combined 87.2% of respondents possessed at least a Higher National Diploma or university degree, including 31.4% with postgraduate qualifications. Only 12.8% held OND/NCE qualifications, while none reported a qualification below the tertiary level. This high level of educational attainment enhances the credibility of the responses, as procurement and risk management decisions typically require technical knowledge, analytical skills, and familiarity with regulatory and strategic frameworks.

The distribution of work experience further reinforces the reliability of the data. Most respondents reported extensive professional experience, with 33.7% having between 21 and 30 years of experience and 25.6% reporting 11–20 years. Those with 1–10 years of experience accounted for 24.4%, while respondents with over 31 years of experience constituted 16.3%. This spread reflects a balanced mix of early-career, mid-career, and highly experienced professionals, allowing the study to capture both contemporary perspectives and long-standing institutional knowledge.

Overall, the demographic profile indicates that the respondents were mature, well-educated, and professionally experienced, thereby providing a sound and credible foundation for the empirical analysis. The diversity across age and experience categories also helps to mitigate the risk of systematic bias associated with homogenous respondent characteristics. Consequently, the demographic composition of the sample strengthens the robustness and practical relevance of the study's findings within the context of public sector procurement and risk management.

4.2 Result

Table 2

Model Summary

Model	R	R Square	R square adjusted	Std. error of the estimate	Durbin Watson statistic
1	.887 ^a	.787	.773	.251	1.812

a. Predictors: (Constant), Risk sharing, Risk retention.

b. Dependent Variable: Supplier Selection

Source: Author's Computations using SPSS 2025.

The overall strength of the model is confirmed by the model summary statistics in Table 2. The R-squared value of 0.787 indicates that approximately 78.7% of the variability in supplier selection decisions is explained by the two risk management strategies (risk retention and risk sharing) were included. The adjusted R-squared of 0.773 reaffirms this explanatory power after accounting for the number of predictors. Additionally, the Durbin-Watson statistic of 1.812 suggests that there is no serious autocorrelation in the residuals, reinforcing the reliability of the regression results.

Table 3

Regression Coefficients

Model	Unstandardized coefficients (B)	Standardized coefficients (Beta)	t	P-Value
1 (Constant)	7.1737		2.244	.000
Risk retention	.250	.289	3.294	.004
Risk sharing	.290	.315	3.625	.002

a. Dependent Variable: Supplier Selection

Source: Author's Computations using SPSS 2025.

The regression coefficient results in Table 3 show that risk retention has a positive and statistically significant effect on supplier selection. Risk retention has a positive and statistically significant effect on supplier selection, with an unstandardized coefficient (B) of 0.250 and a standardized Beta of 0.289. This suggests that for every one-unit increase in risk retention practices, supplier selection improves by 0.250 units. The p-value (.004) and t-value (3.294) confirm statistical significance at the 5% level. This suggests that when the authority chooses to absorb certain risks internally - such as minor supplier delays or cost fluctuations - it can still make effective supplier selections. This might be because retaining risk allows for flexible, adaptive strategies in supplier relationships without the burden of excessive contractual complexity or cost implications.

Similarly, risk sharing demonstrates a positive and significant influence on supplier selection. Risk sharing has a positive and statistically significant effect on supplier selection, with an unstandardized coefficient (B) of 0.290 and a standardized Beta of 0.315. This suggests that for every one-unit increase in risk retention practices, supplier selection improves by 0.290 units. This is indicating a slightly stronger impact than risk retention. The p-value (.002) and t-value (3.625) confirm statistical significance at the 5% level. This implies that when the LBRBDA engages in risk-sharing mechanisms - such as collaborative partnerships, shared accountability for outcomes, or incentive-based contracts - it enhances its ability to choose reliable suppliers. Risk sharing encourages mutual responsibility between the buyer and the supplier, fostering trust, innovation,

and long-term alignment of goals, all of which are beneficial in complex procurement environments.

Overall, both risk retention and risk sharing significantly influence supplier selection decisions at LBRBDA. While risk retention allows the organization to internally manage specific uncertainties without derailing supplier engagement, risk sharing fosters mutual accountability and supports strategic alignment with reliable vendors. Notably, risk sharing emerged as a slightly stronger predictor, indicating its critical role in building long-term, ethical, and performance-oriented supplier relationships. This finding aligns with Tyozenda et al. (2025), who reported that risk management strategies significantly influence supplier selection within the LBRBDA. However, the present study extends this understanding by demonstrating that risk sharing exerts a stronger effect than risk retention, thereby providing a more nuanced explanation of how specific strategies shape procurement outcomes.

4.3 Test of Hypotheses and Discussion of Findings

i. Test of Hypothesis H01: Risk retention has no significant effect on supplier selection in LBRBDA.

Statistical result: This hypothesis proposes that risk retention does not significantly affect supplier selection. The regression output reveals a t-value of 3.294 and a p-value of 0.004. **Interpretation:** Since the p-value is less than 0.05, we reject the null hypothesis. This indicates that risk retention does have a significant effect on supplier selection in LBRBDA. The t-value, although slightly lower than the previous variables, still reflects a meaningful positive relationship. This suggests that retaining certain risks within the organization can influence the criteria used for selecting suppliers. Thus, risk retention remains a pertinent consideration in supplier selection decisions. This finding can be understood in the context of organizational learning and adaptive capacity. If LBRBDA is increasingly capable of anticipating and containing certain procurement risks without external dependencies, it may signal a growing institutional confidence. **Literature support:** The work of Usman et al. (2024) lends support to this interpretation. They emphasized that risk retention could yield positive results when it is applied within systems. It can influence strategic decision-making in both financial and non-financial organizational settings. Similarly, Mumassabba et al., (2022) further supports the assertion that well-managed internal risk absorption can strengthen institutional responsiveness and competitiveness, principles which are equally vital in selecting capable and reliable suppliers under uncertain or resource-constrained conditions.

Nonetheless, the relatively lower Beta coefficient of risk retention in this study implies that LBRBDA should not rely heavily on internalizing risks when making supplier selection decisions. While it plays a role, particularly in low-impact or recurrent procurement scenarios, it is unlikely to drive significant improvements in supplier quality or service delivery on its own. Instead, risk retention should be seen as a supportive mechanism effective only when integrated into a broader risk governance framework.

ii. Test of Hypothesis H02: Risk sharing has no significant effect on supplier selection in LBRBDA.

Statistical result: This hypothesis examines whether risk sharing affects supplier selection. The results show a t-value of 3.625 and a p-value of 0.002. **Interpretation:** As the p-value is less than 0.05, we reject the null hypothesis, confirming that risk sharing significantly influences supplier selection in LBRBDA. The t-value indicates a moderate to strong relationship, implying that sharing risks with suppliers or partners plays a significant role in how suppliers are chosen. Hence, risk sharing is a key factor that should be considered in the supplier selection process at LBRBDA.

Literature support: The result corroborates the conclusion of Paraskeva and Tsoulfas (2025), who observed that risk sharing frameworks enhance supplier responsiveness and foster better decision-making in procurement. Thus, study provides a compelling empirical basis for the LBRBDA and similar agencies to implement structured risk-sharing strategies as a critical factor in improving supplier selection, encouraging greater participation, and ensuring sustainable project execution. Similarly, the findings resonate with those of Mwalukasa and Sallwa (2024), who established that collaborative risk-sharing approaches in the Nigerian public sector led to better contract adherence and strengthened trust between organizations and vendors. Therefore, this study reinforces the argument that risk sharing should not be treated as an afterthought in procurement planning but rather as a core consideration in the supplier selection process, especially in capital-intensive public sector projects. The empirical agreement between these studies and the present research highlights the strategic importance of cooperation and mutual trust in the procurement environment of LBRBDA.

4.4 Theoretical Implications

Beyond its empirical contributions, this study offers important theoretical implications for procurement and risk management scholarship. First, the positive and significant effect of risk sharing on supplier selection provides empirical support for the core propositions of TCE, which argue that collaborative governance mechanisms reduce transaction uncertainty, opportunism, and coordination costs in exchange relationships. By demonstrating that risk sharing enhances supplier selection effectiveness in a public-sector context characterized by institutional constraints, the study reaffirms the relevance of TCE in explaining procurement behavior beyond private-sector and developed-economy settings.

Second, the significant but comparatively weaker effect of risk retention extends insights from the RBV by highlighting the role of internal risk management capabilities as strategic organizational resources. The findings suggest that the ability of public organizations to internally absorb and manage certain procurement risks constitutes a valuable capability that can improve decision-making quality in supplier selection. However, the relatively lower explanatory strength of risk retention indicates that such internal capabilities are most effective when complemented by external, relational risk-sharing arrangements.

Taken together, the study advances existing theory by empirically demonstrating that effective supplier selection in public procurement is best explained through a hybrid governance perspective that combines relational risk-sharing mechanisms (as emphasized by TCE) with internally embedded risk management capabilities (as emphasized by RBV). This integrated perspective is particularly relevant for public-sector organizations operating in developing economies, where institutional weaknesses necessitate both collaborative governance and strong internal risk controls.

5 CONCLUSION AND RECOMMENDATIONS

This study examined the effect of risk management strategies, specifically risk retention and risk sharing, on supplier selection at the LBRBDA. Drawing on empirical evidence from procurement-related stakeholders, the findings confirm that both strategies exert a statistically significant influence on supplier selection outcomes, though to varying degrees. Risk retention was found to have a positive but moderate effect, indicating that internally absorbing certain manageable risks can support informed supplier evaluation when supported by adequate institutional controls. In contrast, risk sharing emerged as a stronger predictor, underscoring the importance of collaborative governance mechanisms in enhancing supplier reliability, accountability, and long-term performance in public-sector procurement.

The results demonstrate that effective supplier selection in public organizations is not driven by a single risk response approach but rather by a balanced combination of internally managed risks and externally shared responsibilities. While risk retention allows LBRBDA to maintain operational flexibility in low-impact or routine procurement situations, risk sharing promotes mutual commitment, transparency, and alignment of incentives, particularly in complex or high-value procurement projects. This reinforces the strategic relevance of structured risk-sharing arrangements in strengthening supplier relationships and improving procurement outcomes.

From a theoretical perspective, the study confirms and extends the propositions of Transaction Cost Economics by empirically demonstrating that risk-sharing mechanisms help reduce transactional uncertainty and opportunism in public procurement contexts. It also reinforces insights from the Resource-Based View by highlighting internal risk management capability as an important organizational resource that supports effective supplier selection, albeit most impactful when complemented by relational risk governance. By empirically validating these theoretical perspectives within a Nigerian public-sector institution, the study contributes to the limited body of procurement risk literature in developing economies.

Overall, the findings provide both academic and practical value. Academically, the study strengthens the theoretical linkage between risk management strategies and supplier selection in public procurement. Practically, it offers evidence-based guidance for policymakers and procurement managers, emphasizing the need to institutionalize risk-sharing mechanisms while maintaining controlled risk retention practices. Such a balanced risk management approach is essential for enhancing procurement effectiveness, safeguarding public resources, and achieving sustainable infrastructure delivery within organizations such as the LBRBDA.

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DATA AVAILABILITY

The dataset supporting the results of this study is not publicly available.