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Effect of Data Analytics on Procurement Decision Making in Nile University of Nigeria

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Abstract: *The reliance on data-driven techniques has drastically reformed the decision-making processes across organisations, with procurement functions increasingly expected to deliver efficiency, transparency, and value. This research evaluates the effect of data analytics on procurement decision-making in Nile University of Nigeria, Abuja. Exclusively, the study examines how the major key components of data analytics, spend analysis, vendor performance analytics, and procurement data utilization, effect outcomes such as cost efficiency, supplier selection, and effective procurement planning. A descriptive survey design was embraced for the research and using a measurable approach. Data was collected from staff who are directly involved in procurement-related operations through a well-structured questionnaire and analysed with the aid of regression techniques. The study is supported based on the Technology Acceptance Model, which provides better understanding into how identified usefulness and ease of use structure the adoption of analytical devices within organisational processes. The study emphasizes the practical significance of data analytics in enhancing procurement performance, specifically in educational institutional settings where paperwork processes exist. It also provides context-specific facts from a Nigerian university, contributing to a reasonably underexplored area in existing literature. The findings emphasize the need for robust investment in data analytics capabilities, as well as capacity building among procurement personnel, to support more informed and effective procurement decision-making.*

Keywords: data analytics, procurement decision-making, spend analysis, vendor performance analytics, procurement data utilisation, procurement efficiency

INTRODUCTION

In today's business environment, it is necessary to improve the procurement process as it is essential for rational decision-making in organisations. Over the past few years, organisations have undergone major changes due to the wide acceptance of data-driven decision making in improving operational efficiency and accountability (Babayeju, Jambol, & Esiri, 2024). Many organisations

are drastically moving away from the traditional methods of making decisions to more analytical processes which rely solely on data analytics, performance dashboards, and business intelligence systems, including predictive models such as time series forecasting and regression analysis (Animashaun, Familoni, & Onyebuchi, 2024). This shift is largely driven by advances in big data and digital tools. These tools help organisations generate real-time data for better decision-making. For procurement, this transition is essential, as procurement decisions directly affect cost management, supplier evaluation and the overall organizational performance (Udeh, Amajuoyi, Adeusi, & Scott, 2024).

In the institutional business environments such as polytechnics, and universities, the procurement unit performs an essential function in ensuring the quick availability of goods and services which are critical to the success of academic and administrative operation. In the past, procurement activities in many Nigerian universities were largely manual and paper-based, while procurement forecasting relied on individual experience rather than empirical data (Eyaa, & Oluka, 2021). The emergence of data analytics tools has introduced new approaches for improving procurement activities through tools such as spend analysis, supplier performance evaluation, performance dashboards and data-supported planning.

In Nile University of Nigeria, the procurement activities are designed to the effectiveness and efficiency of the institution operation, and it is grouped into direct and indirect procurement activities. However, the institution is like many other higher institutions in Nigeria, there is a need to evaluate the effect of data analytics on procurement decision making in the university. The availability and utilisation of procurement data for tracking expenditure patterns, evaluating vendor performance, and supporting procurement planning remain critical areas that may influence decision quality and efficiency (Chatterjee, Rana, Tamilmani, Sharma, & Dwivedi, 2020). Where data analytics tools are not fully leveraged, procurement decisions may rely more on individual judgement, which could affect the optimisation of decision outcomes (Udeh, Amajuoyi, Adeusi, & Scott, 2024).

Given these observations, the extent to which data analytics are incorporated into procurement activities may affect the level of transparency, accountability, and efficiency experienced within the organisation. The use of a well-structured data analysis can improve the evaluation of supplier reliability, monitoring of procurement performance, and the development of strategic sourcing decisions (Chatterjee et al., 2021; Dubey, Gunasekaran, Childe, Blome, & Papadopoulos, 2021). In the university business environment, where procurement decision activities have a direct effect on service delivery and institutional performance, it is important to understand the role of data analytics.

Despite the tremendous acceptance of data analytics in organisational decision-making, there appears to be limited empirical evidence examining its effect on procurement decision-making within the Nigerian private universities, particularly for Nile University of Nigeria, Abuja. Considering the above gap, there is a need for focused research to provide deep insights into how

effective data analytics can be properly utilised to improve procurement activities in Nile University of Nigeria, Abuja.

Therefore, the aim of this research work is to examine the effect of data analytics on procurement decision-making in Nile University of Nigeria, Abuja, with specific emphasis on spend analysis, vendor performance analytics, and the utilisation of procurement data in enhancing efficiency, cost management, and supplier selection decisions. The remaining part of this study comprises literature review for section two, methodology for section three, findings and discussions for section four and conclusion and recommendations for section five.

LITERATURE REVIEW

The adoption of effective data analytics in organisational decision-making has recently become increasingly important in enhancing efficiency, accuracy, and accountability in modern institutions. Oxford Dictionary (2020) describes data as "the quantities, characters, or symbols on which operations are performed by a computer, which may be stored and transmitted in the form of electrical signals and recorded on magnetic, optical, or mechanical recording media." The above definition does not only includes characters and symbols but also lay emphasis on the fact that a computer plays an important role in data analytics. Moreso, it addresses various approaches by which data can be transmitted and saved. Therefore, data analytics is the art of collecting, organising, and analysing data to identify patterns, trends, and relationships that inform decisions (Komolafe, Aderotoye, Abiona, Adewusi, Obijuru, Modupe & Oyeniran, 2024).

According to Adewusi, Komolafe, Ejairu, Aderotoye, Abiona, & Oyeniran (2024) they defined data analytics as a combines statistical methods, programming, and business knowledge to transform large volumes of raw data into actionable understandings. In contemporary organisations, it has evolved from descriptive reporting to predictive and prescriptive applications, enabling evidence-based decisions rather than intuition, particularly in procurement where supplier selection and cost decisions require high accuracy (Dubey et al., 2021).

Procurement decision-making requires asking certain critical questions: what to procure, from whom, at what cost, and under what conditions, including supplier evaluation and procurement planning (Bag, Gupta, Kumar, & Sivarajah, 2021). Traditionally, procurement in many developing institutions has been manual, paperwork and experience-based; however, modern transformation in procurement activities has introduced data-driven tools such as spend analysis, vendor analytics, and dashboards to improve decision outcomes (Khan, Yu, & Golpîra, 2021).

Spend analysis refers to a process of spotting, accumulating spending data, cleansing and categorizing the information, then analyzing the details to determine how the company is spending its funds and how it can manage the expenditure better (Ekechukwu, & Simpa, 2024). It helps companies visualize their procurement spend data for better supplier and sourcing decisions.

Furthermore, an effective spend analysis report can reveal procurement-maverick expenditure, reduce cycle times, and enhance proper contract compliance.

Baryannis et al (2021) perceived "vendor performance as analytics which enables organisations to evaluate its suppliers based on measurable indicators such as quality, cost-price, and delivery performance, and thereby improving supplier selection and accountability". Spend analysis refers to a process of detecting, collecting spending data, cleansing and classifying the information, then evaluating the details to ascertain how the organisation is spending its funds and how it can reduce its expenditure better (Ekechukwu, & Simpa, 2024). A well prepared and analysed spend analysis helps otganisations to visualize their procurement spend data for better supplier selection and effective sourcing decisions. Moreover, it can reveal maverick spending, reduce cycle times, and improve contract compliance.

Procurement efficiency refers to the ability to achieve procurement objectives at minimal cost, time, and resources, often measured through cost savings, cycle time, and process transparency (Chatterjee et al., 2021). Data analytics improves operation efficiency through real-time insights and forecasting; however, its effectiveness depends on user capability and organisational readiness (Dubey et al., 2021).In university settings, procurement is essential for academic and administrative operations, yet many Nigerian universities still operate manual and fragmented procurement systems with limited use of data analytics tools (Eyaa & Oluka, 2021). This contributes to inefficiencies in supplier selection, cost control, and procurement planning.

The usage of data analytics in procurement is influenced by organisational readiness, technological infrastructure, and nm management support, which determines the extent of its utilisation in decision-making (Wamba, Gunasekaran, Akter, Dubey, & Childe, 2020; Queiroz, Pereira, Telles, & Machado, 2022). Empirical studies confirm that data analytics improves procurement and organisational performance; however, most evidence is drawn from manufacturing and private sector contexts, with limited focus on universities in Nigeria (Adewusi, Komolafe, Ejairu, Aderotoye, Abiona, & Oyeniran, 2024). There remains a gap in understanding how effective data analytics impacts procurement decision-making in Nile University of Nigeria, Abuja.

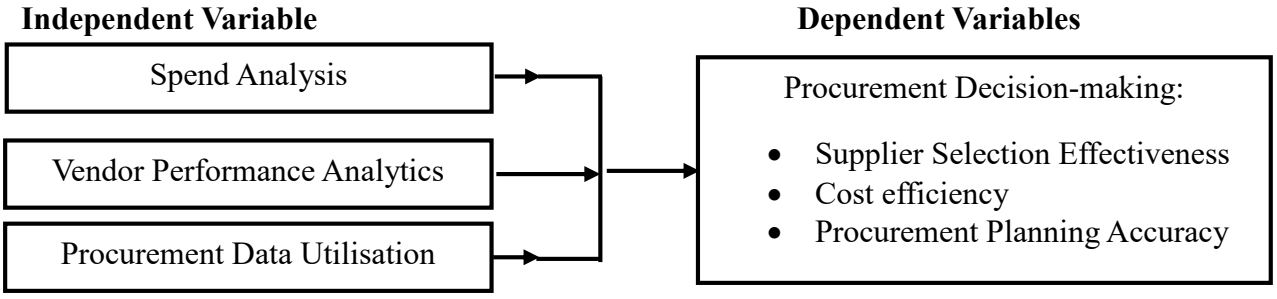

Figure: Conceptual Framework
Source: Author's Compilation, (2026)

Theoretical Review

This study is based on significant theoretical frameworks that elucidate the importance of data analytics in improving organisational decision-making, majorly within the procurement activities. The theories considered suitable for this study include the Technology Acceptance Model (TAM), Resource-Based View (RBV), Decision Theory, and Dynamic Capabilities Theory (DCT). The above listed theories provide a complete insight into how data analytics are being embraced, utilised, and transformed into advanced procurement decision-making results.

In 1989, the Technology Acceptance Model was developed by Davis, it explains how users embrace and adopt new technologies. The model suggests that two key determinants usually influence the users' behavioural intention either accept or reject a system; "Perceived Usefulness" and "Perceived Ease of Use". Furthermore, the technology acceptance model explains the implementation of data analytics tools in procurement processes. In an organisational setting, the procurement personnel are more likely to utilise analytics techniques when they identify that such tools improve decision-making quality, enhance cost efficiency, and simplify an organizational procurement process (Wamba et al., 2020; Dubey et al., 2021). Therefore, effective implentation of data analytics leads to enhanced procurement decisions.

In 1991, the Resource-Based View (RBV) was developed by Barney, the theory suggests that organisational performance is driven by an effective utilisation of substantial, valuable, exclusive, and non-substitutable resources. Data analytics capability is acknowledged as a strategic resource that enhances organisational performance. In procurement operations, data analytics tools, a well-trained procurement analyst, and having access to a well-structured data infrastructure enable organisations to analyse their spending patterns, evaluate supplier performance, forecast and optimise procurement decisions (Akter et al., 2021; Bag et al., 2021). Therefore, any organisation that effectively embrace data analytics tends to achieve enhance procurement performance and informed decision results.

Decision Theory offers a better background for identifying how decisions are made under the settings of uncertainty. The theory highlights the use of data, probabilities, and logical reasoning in selecting the most favorable choices. In procurement business environments, certain decisions relating to supplier selection, cost evaluation, and procurement planning require well-structured, accurate and reliable data. Data analytics enhances decision-making quality by providing fact-based insights, thereby reducing reliance on subjective judgement and improving decision consistency (Khan et al., 2021). The decision theory supports the argument that data-driven procurement leads to effective and efficient organisational outcomes.

Furthermore, the Dynamic Capabilities Theory, developed by Teece, Pisano & Shuen, (1997), explains how organisations develop the ability to integrate, build, and reconfigure internal and external competencies to respond to changing business environments. Data analytics represents a dynamic capability that enables organisations to adapt procurement strategies, respond to market changes, and improve decision-making efficiency as per the research topic in question. Through

analytics, the procurement department can make more accurate forecast demand, monitor supplier performance, and continuously improve procurement activities (Queiroz et al., 2022). This adaptability is essential for achieving efficiency and effectiveness in procurement decision-making.

This study is primarily based on the Technology Acceptance Model (TAM) due to its strong relevance in explaining the adoption and utilisation of data analytics in procurement decision-making.

According to Technology Acceptance Model, the adoption of a technological system is influenced by two major constructs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Davis, 1989). Perceived Usefulness refers to the extent to which procurement officers believe that data analytics improves their job performance, particularly in areas such as supplier selection, cost control, and procurement efficiency. Perceived Ease of Use, on the other hand, refers to the degree to which users believe that the system is simple and effortless to use. In this study, when procurement officers perceive data analytics tools as useful and easy to use, they are more likely to adopt and utilise such tools in decision-making processes (Wamba et al., 2020; Dubey et al., 2021). This utilisation enhances procurement outcomes by improving spend analysis, vendor performance evaluation, and procurement planning. Therefore, this study proposes that the adoption and effective utilisation of data analytics tools will significantly influence procurement decision-making outcomes at Nile University of Nigeria. Specifically, improved data analytics usage is expected to enhance procurement efficiency, reduce costs, and improve supplier selection decisions.

Empirical Review

Empirical studies have increasingly examined the role of data analytics in improving organisational performance and decision-making, particularly within supply chain and procurement functions. Wamba et al. (2020) investigated the impact of big data analytics capability on firm performance using a quantitative approach. The research employed survey data and structural equation modelling found that data analytics significantly improve operational efficiency and decision-making quality. Results showed that organisations with strong analytics capabilities are better positioned to make accurate and timely decisions. However, evidence from the research focused on private sector firms and did not specifically address procurement decision-making in institutional settings.

Dubey et al. (2021) examined the relationship between data analytics capability and supply chain performance using survey data from manufacturing firms. The findings revealed that data analytics enhances supply chain agility, visibility, and decision-making efficiency. Findings from the research further established that analytics-driven insights improve procurement-related decisions such as supplier selection and demand forecasting. Despite its relevance, finding further established that the research was limited to manufacturing organisations and did not consider the higher education sector.

Bag et al. (2021), they evaluated "the influence of data analytics on supply chain performance and sustainability". In their study, they adopted regression analysis, finding from their study depicts that organisations that adopt analytics-driven procurement practices tend to experience enhanced cost efficiency, supplier performance, and operational effectiveness. Generally, the outcomes of their research underscore that data analytics play an essential role in improving procurement decision-making. However, the research was conducted in a manufacturing organisation, which tends to limit its applicability in an educational institution.

Akter et al. (2021) assessed the relationship between data analytics capability and firm performance using a resource-based perspective. Evidence gathered from study shows that data analytics significantly improves organisational decision-making and performance results. The findings further established that data-driven decision-making leads to advanced cost control and operational efficiency. One of the major constraint of the research lies in its wide organisational focus, without certain concentration on procurement operations.

Queiroz et al. (2022), they evaluated the adoption of digital technologies, and data analytics, in supply chain management. Their findings suggested that organisations that implement analytics tools tend to achieve improved transparency, efficiency, and decision-making accuracy. The finding further established that analytics supports procurement planning, spend analysis, and supplier evaluation. However, this study did not focus specifically on procurement decision-making in tertiary institutions.

Baryannis et al. (2021) they *examined the application of data analytics in supplier selection and evaluation. The findings show that analytics-based supplier evaluation enhances procurement of decision accuracy, reduces risks, and enhances operational efficiency. The outcomes of the study emphasised the importance of structured data systems in procurement decision-making. However, the study was largely conceptual and lacked recent empirical focus on developing economies.

Adu-Gyamfi, Asamoah, & Nyuur (2022) examined the procurement practices in developing institutional environments and they found that many institutions still rely on manual, paperwork and experience-based decision-making. The study suggested that the absence of data analytics tools leads to inefficiencies in supplier selection and cost management. The findings further suggest the need for data-driven procurement systems to enhance decision-making results.

Chatterjee et al. (2021), they investigated the role of digital technologies on organisational performance, and they found out that data analytics significantly improves operational efficiency and transparency. The findings show that organisations that implement analytics into their processes experience better decision outcomes. However, the conclusions from the research did not specifically assess procurement decision-making.

In the Nigerian setting, Eyaa and Oluka (2021) observed that procurement techniques in many institutions remain largely manual, and paperwork, limiting the effectiveness of decision-making

processes. Similarly, Usman (2022) established that while organisations acknowledge the significance of digital systems, the implementation of data analytics in procurement operations remains low due to infrastructural and organisational challenges.

Generally, the empirical facts propose that data analytics significantly improve decision-making, efficiency, and performance. However, majority of the research focus on private entities and manufacturing environments, with restricted attention to procurement decision-making in universities, particularly in Nigeria.

Literature Gap

Based on the above review of existing literature, the following gaps were identified.

First, many studies have assessed data analytics in relation to overall organisational performance, supply chain efficiency, or general decision-making (Wamba et al., 2020; Akter et al., 2021; Dubey et al., 2021). However, there is inadequate empirical research that specifically focuses on procurement decision-making, such as cost efficiency, supplier efficiency and procurement planning accuracy as a dependent variable. This study addresses this gap by connecting data analytics directly to procurement decisions such as supplier selection, cost management, and procurement planning as reflected in the conceptual framework.

Second, existing studies are mostly conducted in manufacturing, public sector and private sector organisations, with little attention given to the tertiary institution, particularly the education sector (Bag et al., 2021; Queiroz et al., 2022). Universities operate under unique procurement structures that require accountability and efficiency, yet empirical evidence in this context remains inadequate. This study fills this contextual gap by focusing on Nile University of Nigeria.

Third, there is a lack of studies that evaluate specific components of data analytics, such as spend analysis, vendor performance analytics, and procurement data utilisation, in relation to procurement decision-making. Most studies perceive data analytics as a broad construct without disaggregating its components. This study addresses this gap by assessing these variables independently.

Finally, in the Nigerian context, there is inadequate empirical evidence on the use of data analytics in procurement processes within institutions. This study contributes to the existing literature by supplying context-specific fact from a Nigerian university setting, with focus on Nile University of Nigeria, Abuja.

METHODOLOGY

This study adopts a Descriptive Survey Design using a quantitative approach. This design is suitable because the research aims to assess the effect of data analytics on procurement decision-making in Nile University of Nigeria, Abuja. The descriptive nature allows for the systematic collection of data on the characteristics of respondents, while the quantitative approach permits

the statistical testing of the relationships between data analytics and procurement decision-making, leading to generalisable conclusions. This study draws its population from staff of Nile University of Nigeria, Abuja, particularly those involved in procurement-related activities such as procurement officers, store officers, finance officers, and facility management staff. These categories of staff were selected based on their direct involvement in procurement decision-making processes. A purposive sampling technique is adopted to select respondents, ensuring that only relevant and knowledgeable participants are included in the research. The instrument for data collection is a self-administered structured questionnaire, designed using a 5-point Likert scale to capture respondents' views on spend analysis, vendor performance analytics, procurement data utilisation, and procurement decision-making such as supplier selection effectiveness, cost efficiency, and procurement planning accuracy

Model Specification

In line with the above literature, a regression model is generally adopted in specifying the relationships between independent and dependent variables. The model was adopted from the work of Mwangi and Arani (2021) among other empirical studies that carried out studies between data analytics and procurement decision-making. The model for this study is presented below:

$$PDM = f(SA, VPA, PD)$$

The econometric model is specified as:

$$PDM = \beta_0 + \beta_1 SA + \beta_2 VPA + \beta_3 PD + \mu$$

Where: PDM = Procurement Decision-Making (Dependent Variable); SA = Spend Analysis; VPA = Vendor Performance Analytics; PD = Procurement Data Utilisation; β_0 = Intercept; β_1–β_3 = Regression coefficients; μ = Error term

This model assumes that procurement decision-making is influenced by data analytics components such as spend analysis, vendor performance analytics, and procurement data utilisation.

RESULTS AND DISCUSSION

This chapter presents the results of the statistical analyses conducted to examine the influence of procurement analytics on procurement decision-making. Specifically, the study investigated the effects of spend analysis, vendor performance analytics, and procurement data utilisation on procurement decision-making. The analyses were conducted using descriptive statistics, Pearson Product Moment Correlation, and Multiple Linear Regression. The chapter also provides an interpretation and discussion of findings in relation to the study objectives and extant literature.

Descriptive Analysis of Study Variables

Descriptive statistics were employed to determine the central tendency and dispersion of the study variables.

Table 4.1: Descriptive Statistics of Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Spend Analysis	700	2.0	5.0	4.079	.8446
Vendor Performance Analytics	700	1.0	5.0	4.129	.9376
Procurement Data Utilisation	700	1.0	5.0	3.813	.9542
Procurement Decision Making	2100	1.0	5.0	3.771	.9293
Valid N (listwise)	700				

Source: Researcher's Field Survey (2026)

The descriptive statistics reveal relatively high mean scores across all variables, indicating that respondents generally agreed that procurement analytics practices are prevalent and influential in procurement decision-making processes. Vendor Performance Analytics recorded the highest mean score (Mean = 4.129), suggesting that respondents perceive supplier performance monitoring and evaluation as a critical component of procurement management. Spend Analysis also recorded a high mean score (Mean = 4.079), implying that systematic analysis of expenditure patterns contributes significantly to procurement effectiveness. Procurement Data Utilisation recorded a mean score of 3.813, indicating moderate to high utilisation of procurement information for decision-making purposes. The relatively low standard deviations suggest a reasonable degree of consensus among respondents regarding the role of procurement analytics in organisational decision-making.

Regression Analysis

Multiple regression analysis was conducted to examine the predictive effects of Spend Analysis, Vendor Performance Analytics, and Procurement Data Utilisation on Procurement Decision Making.

Model Summary

Table 4.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.661[a]	.437	.434	.6895	1.721

a. Predictors: (Constant), Procurement Data Utilisation, Spend Analysis, Vendor Performance Analytics
b. Dependent Variable: Procurement Decision Making

The coefficient of multiple correlation (R = 0.661) indicates a strong positive relationship between the predictor variables and procurement decision-making. The coefficient of determination (R^2 = 0.437) indicates that 43.7% of the variation in procurement decision-making is jointly explained by spend analysis, vendor performance analytics, and procurement data utilisation. This level of explanatory power is considered substantial in behavioural and management sciences, where organizational outcomes are often influenced by multiple interacting variables. The Durbin-Watson statistic of 1.721 suggests that autocorrelation is not a significant concern in the regression model, thereby satisfying one of the assumptions of linear regression.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square
1	Regression	256.711	3	85.570
	Residual	330.923	696	.475
	Total	587.634	699	

a. Dependent Variable: Procurement Decision Making
b. Predictors: (Constant), Procurement Data Utilisation, Spend Analysis, Vendor Performance Analytics

The ANOVA result indicates that the overall regression model is statistically significant ($F = 179.972$, $p < 0.001$). This demonstrates that the independent variables collectively exert a significant influence on procurement decision-making. The result confirms the suitability of the model for explaining procurement decision-making behaviour within the study context

Variables	B	Beta	t-value	p-value
Constant	0.545	-	3.548	0
Spend Analysis	0.247	0.228	7.037	0
Vendor Performance Analytics	0.367	0.375	11.197	0
Procurement Data Utilisation	0.239	0.248	7.993	0

Regression Model

$$PDM = 0.545 + 0.247(SA) + 0.367(VPA) + 0.239(PDU)$$

The regression coefficients indicate that all predictor variables exert statistically significant positive effects on procurement decision-making. A unit increase in Spend Analysis is associated with a 0.247 increase in Procurement Decision Making, holding other variables constant. Similarly, a unit increase in Vendor Performance Analytics increases Procurement Decision Making by 0.367 units, while Procurement Data Utilisation increases Procurement Decision Making by 0.239 units. Among the predictors, Vendor Performance Analytics emerged as the strongest determinant of Procurement Decision Making ($\beta = 0.375$), suggesting that supplier performance information is the most influential procurement analytics dimension within the study.

Test of Research Hypotheses

Hypothesis One

H_{01}: Spend Analysis has no significant effect on Procurement Decision Making.
The regression result revealed that Spend Analysis significantly predicts Procurement Decision Making ($\beta = 0.228$; $t = 7.037$; $p < 0.05$).
Decision: Reject H_{01}.
Conclusion: Spend Analysis significantly influences Procurement Decision Making.

Hypothesis Two

H_{02}: Vendor Performance Analytics has no significant effect on Procurement Decision Making.
The result showed that Vendor Performance Analytics significantly predicts Procurement Decision Making ($\beta = 0.375$; $t = 11.197$; $p < 0.05$).
Decision: Reject H_{02}.
Conclusion: Vendor Performance Analytics significantly influences Procurement Decision Making.

Hypothesis Three

H_{03}: Procurement Data Utilisation has no significant effect on Procurement Decision Making.
The result indicated that Procurement Data Utilisation significantly predicts Procurement Decision Making ($\beta = 0.248$; $t = 7.993$; $p < 0.05$).
Decision: Reject H_{03}.
Conclusion: Procurement Data Utilisation significantly influences Procurement Decision Making.

DISCUSSION OF FINDINGS

The findings demonstrate that procurement analytics significantly enhances procurement decision-making. The positive and significant effect of Spend Analysis suggests that organizations that systematically evaluate spending patterns are better positioned to optimize procurement costs, identify inefficiencies, and improve resource allocation. This finding aligns with the Resource-Based View (RBV), which emphasizes the strategic value of organizational information resources in generating competitive advantage. The study further revealed that Vendor Performance Analytics exerts the strongest influence on procurement decision-making. This finding underscores the importance of supplier evaluation metrics in procurement strategy. Organizations increasingly rely on supplier performance indicators such as quality, delivery reliability, responsiveness, and compliance to support evidence-based procurement decisions. This finding is consistent with studies that emphasize supplier performance management as a critical determinant of procurement effectiveness and supply chain performance.

The positive effect of Procurement Data Utilisation indicates that organizations that effectively collect, analyze, and apply procurement information are more likely to make informed and strategic procurement decisions. The finding supports the Data-Driven Decision-Making Theory, which posits that organizational decisions are enhanced when supported by accurate and timely data. Collectively, the findings suggest that procurement analytics serves as a strategic capability that enables organizations to improve procurement outcomes through enhanced visibility, transparency, accountability, and evidence-based decision-making.

CONCLUSION AND RECOMMENDATIONS

This study contributes to the existing literature by providing empirical evidence on the relationship between procurement analytics and procurement decision-making. It demonstrates that spend

analysis, vendor performance analytics, and procurement data utilisation significantly influence procurement decisions.

The study further identifies vendor performance analytics as the most significant predictor of procurement decision-making, thereby highlighting its strategic importance in procurement management.

Implications of the Study

The findings of this study have important implications for both theory and practice. From a theoretical perspective, the study provides empirical support for the Resource-Based View, which emphasizes the importance of organizational capabilities as sources of competitive advantage. The findings suggest that procurement analytics represents a valuable organizational capability that can enhance decision quality and improve procurement outcomes. The study also supports the principles of data-driven decision-making theory, which argues that organizational decisions are more effective when based on accurate and relevant data. From a practical perspective, the findings highlight the need for organizations to prioritize the development of procurement analytics capabilities. Procurement managers should move beyond traditional procurement practices and embrace data-driven approaches that support strategic decision-making. The study also emphasizes the importance of supplier performance evaluation as a critical component of procurement management. The findings further suggest that organizations should invest in procurement information systems and analytical tools that facilitate data collection, analysis, and reporting. Such investments will enable procurement professionals to generate insights that support effective decision-making and organizational performance.

Considering the findings and conclusions of this study, the following recommendations are proposed: Organizations should strengthen spend analysis practices to improve expenditure control and identify cost-saving opportunities. Organizations should also establish robust vendor performance management systems to support objective supplier evaluation and selection. Management should encourage the effective utilisation of procurement data by investing in appropriate information systems and analytical tools. Furthermore, procurement professionals should receive continuous training in procurement analytics and evidence-based decision-making to improve their analytical capabilities. Finally, organizations should develop policies that encourage evidence-based procurement decision-making. Major procurement decisions should be supported by analytical evidence rather than personal judgment or assumptions.

Contribution to Knowledge

This study contributes to the existing body of knowledge on procurement management and procurement analytics in several important ways. First, the study provides empirical evidence on the relationship between procurement analytics and procurement decision-making. While previous studies have examined various aspects of procurement performance, this study specifically demonstrates how spend analysis, vendor performance analytics, and procurement data utilisation influence procurement decision-making. Second, the study identifies vendor performance

analytics as the most influential determinant of procurement decision-making. This finding contributes to the literature by highlighting the critical role of supplier performance information in procurement management. Third, the study extends the application of the Resource-Based View and data-driven decision-making theory within the procurement context. The findings demonstrate that procurement analytics capabilities can serve as strategic organizational resources that enhance decision quality and procurement effectiveness. Finally, the study provides a practical framework that organizations can adopt to improve procurement decision-making through the effective use of procurement analytics.

Suggestions for Further Research

Future studies should examine other dimensions of procurement analytics such as predictive analytics, contract analytics, and supply risk analytics. Researchers may also investigate the moderating effects of organizational factors such as technology adoption, organizational culture, and management support. Moreso, longitudinal studies and comparative studies across different sectors are recommended to provide deeper insights into the relationship between procurement analytics and procurement decision-making.

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