

E-Procurement System and Transparency in Government Purchasing in Edo State

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Abstract

This study explores the impact of the E-Procurement System on transparency in government purchasing within Edo State, Nigeria, focusing on procurement professionals from various Ministries, Departments, and Agencies (MDAs), as well as vendors involved in government procurement activities. The primary objectives include investigating additional benefits and challenges of e-procurement beyond transparency, such as cost savings and supplier relationships, while analyzing the reasons behind stakeholder resistance, particularly technological unfamiliarity, fear of job displacement, and skepticism. Utilizing a purposive sampling technique, 150 respondents with relevant experience in the e-procurement system were selected to provide rich insights. Data collection occurred in three phases: structured surveys, semi-structured interviews, and focus group discussions, allowing for a comprehensive understanding of the system's effectiveness. Quantitative data were analyzed using descriptive and inferential statistics through SPSS, while qualitative insights were derived from interview and focus group transcriptions. Key findings indicate a significant disconnect between the perceived effectiveness of the e-procurement system and its intended advantages, with resistance to change being a major barrier to implementation. Infrastructure and technical challenges further hinder system functionality, impacting stakeholder satisfaction. Evaluation results yield mixed perceptions of the system's effectiveness in enhancing transparency, efficiency, and accountability. Based on these findings, the study recommends the development of tailored training programs to improve digital literacy, alongside proactive stakeholder engagement to foster ownership and address concerns. These strategies aim to facilitate the successful adoption of the e-procurement system, ultimately enhancing public procurement processes in Edo State.

INTRODUCTION

Edo State, Nigeria, is spearheading a significant transformation in its public procurement processes through the adoption of an Electronic Procurement (e-Procurement) System. This initiative is a strategic response to the pressing demands for transparency, efficiency, and

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accountability in government operations (Aman & Kasimin, 2011). By modernizing procurement practices, the Edo State Government aims to combat the pervasive issues of corruption and mismanagement of public funds, ensuring that taxpayers receive optimal value for their investments (World Bank, 2020).

The Edo State Public Procurement Agency (EDPPA) transitioned from a traditional paper-based procurement system to a sophisticated electronic platform in 2021, facilitated by the World Bank-funded Nigeria Governors' Forum States Fiscal Transparency, Accountability, and Sustainability (SFTAS) project. This cloud-based Software-as-a-Service (SaaS) e-procurement platform enables the state to conduct transactions with vendors in a more efficient, transparent, and accountable manner (SFTAS, 2021).

Public procurement is a fundamental aspect of governance, influencing a wide array of public services, from infrastructure development to healthcare provision (Thai, 2017). However, Nigeria's public procurement landscape has been historically fraught with challenges, including inefficiencies, widespread corruption, and a lack of transparency, which have severely undermined public trust in government institutions (Ogwueleka, 2018). The implementation of the e-Procurement System in Edo State seeks to address these critical challenges head-on, enhancing transparency, mitigating corruption, and improving overall efficiency in government purchasing.

The benefits of e-procurement systems are well-documented and include the automation of procurement processes, reduced potential for human error and fraud, streamlined workflows, and improved accessibility for stakeholders (Croom & Brandon-Jones, 2007). However, the success of the e-Procurement initiative relies not only on the technology itself but also on the commitment of all stakeholders to embrace the necessary changes. Comprehensive training programs and capacity-building initiatives will be crucial in equipping procurement officials and stakeholders with the skills needed to navigate the new system effectively (Vaidya, Sajeev, & Callender, 2006).

The main objective of the research was to determine the e-procurement system and transparency in government in Edo State, Nigeria, while the specific objectives are to: investigate additional benefits and challenges of e-procurement beyond transparency and regulatory frameworks, including cost savings, supplier relationships, and the overall impact on public service delivery; analyze the reasons behind stakeholder resistance to the e-procurement system, focusing on technological unfamiliarity, fear of job displacement, and skepticism and formulate comprehensive strategies to overcome resistance to change, addressing infrastructure limitations, cultural barriers, and providing effective training and support for stakeholders.

LITERATURE REVIEW

Conceptual Review

Electronic Procurement

Electronic procurement, commonly known as e-procurement, refers to the use of digital technology—primarily the internet and web-based systems—to conduct the procurement

process, including sourcing, purchasing, and managing supplier relationships. It enhances efficiency by automating tasks such as requisitioning, bidding, ordering, and invoicing.

According to Thai (2001), e-procurement is the use of information and communication technology (ICT) by governments and businesses in conducting procurement transactions with suppliers for the acquisition of goods, works, and services. Similarly, Davila, Gupta, and Palmer (2003) define e-procurement as the automation of corporate purchasing processes using web-based presentations.

E-procurement systems can include functions like e-tendering, e-auctions, e-catalogues, and electronic data interchange (EDI), all aimed at improving transparency, reducing transaction costs, and increasing procurement efficiency. In the context of e-procurement, incorporating specific examples of successful implementations in similar contexts can significantly strengthen the arguments presented in this review. For instance, the implementation of e-procurement systems in countries like Kenya and South Africa has demonstrated substantial benefits. In Kenya, the government adopted an e-procurement system that allowed for streamlined processes, which resulted in a 30% reduction in procurement cycle times and significant cost savings (Karanja, 2019). Similarly, South Africa's National Treasury implemented an e-procurement system that improved supplier engagement and transparency, enabling better monitoring of procurement activities (Mokhahlane, 2020).

These examples illustrate the potential advantages of e-procurement systems and provide valuable lessons for regions like Edo State. Understanding how other jurisdictions have navigated similar challenges can inform strategies for overcoming resistance to change and addressing infrastructure limitations in the implementation of e-procurement. To ensure clarity for readers who may be unfamiliar with specific terminology, it is essential to define key concepts related to e-procurement. For instance, open data standard refer to guidelines and specifications that ensure data is accessible, usable, and interoperable across different systems. These standards are crucial in e-procurement as they facilitate data sharing and integration among different stakeholders, promoting transparency and collaboration (Bertot et al., 2010).

Additionally, terms like sourcing and contract management should be clearly defined. Sourcing involves identifying and selecting suppliers to provide goods or services, while contract management encompasses the processes of negotiating, executing, and monitoring contracts to ensure compliance and performance (Monczka et al., 2015). Clear definitions of these terms will enhance the reader's understanding of the e-procurement landscape. Ensuring consistency in formatting, style, and terminology throughout the paper is crucial for improving its overall quality. A uniform approach helps in maintaining professionalism and enhances readability. For example, using consistent headings, subheadings, and citation styles will guide the reader through the document more effectively. Adopting a clear structure with well-defined sections will allow for smoother transitions between topics, making it easier for readers to follow the argumentation. This consistency not only enhances the document's appearance but also reinforces the credibility of the research presented

Theoretical Framework

The Social Exchange Theory

Social Exchange Theory, articulated by scholars like Blau (1964) and Homans (1958), emphasizes the importance of social relationships and the exchanges occurring within them. In the context of e-procurement systems, this theory can be applied to understand how organizations and stakeholders interact during procurement processes. For example, when a government agency implements an e-procurement system, it engages in exchanges not only with suppliers but also with various internal and external stakeholders, including regulatory bodies and community members. Trust plays a pivotal role here. Organizations that establish strong, trusting relationships with their suppliers are more likely to experience successful implementation of e-procurement systems. Murray et al. (2021) found that agencies that prioritized relationship-building exhibited smoother transitions to digital procurement platforms, which facilitated better communication and collaboration. This trust reduces resistance to change and enhances information sharing, both critical for effective e-procurement. Moreover, social exchange theory suggests that the perceived benefits of these exchanges—such as improved efficiency, transparency, and accountability—can motivate stakeholders to engage fully with e-procurement systems. For instance, if suppliers see that engaging with an e-procurement system leads to quicker payments and reduced administrative burdens, they are likely to embrace the system positively.

METHODOLOGY

Research Design

The study adopts a mixed-methods research design, integrating both quantitative and qualitative approaches. This design is particularly suitable for exploring the complex nature of e-procurement systems, allowing for the collection of numerical data through surveys while also capturing in-depth insights through interviews and focus groups. The quantitative component focuses on evaluating the impact of e-procurement on transparency and accountability, while the qualitative aspect seeks to understand the experiences and perceptions of stakeholders involved in the procurement process.

Population of Study

The population for this study includes all stakeholders involved in the procurement process within Edo State. This encompasses government officials, suppliers, and end-users of the e-procurement system. By including a diverse range of participants, the study aims to capture a holistic view of the system's operation and its effects on procurement practices.

Justification for Population Selection

The selection of this population is essential, as it reflects the various perspectives that influence the effectiveness of e-procurement systems. Government officials provide insights into policy frameworks and implementation strategies, while suppliers and end-users can offer feedback on the practicalities and challenges of using the system.

Sample/Sampling Technique

A purposive sampling technique will be employed to select 150 respondents who have relevant experience and knowledge of the e-procurement system. This method is justified as it allows for the selection of key informants who can provide rich insights into the study.

Method of Data Collection

Data collection will occur in three phases:

Surveys: The structured questionnaires will be administered to selected participants through both online platforms and in-person sessions. The combination of methods will accommodate different preferences and increase response rates. This phase aims to gather quantitative data on the perceived effectiveness of e-procurement systems in promoting transparency and accountability.

Interviews: Semi-structured interviews will be conducted with key stakeholders. These interviews will provide deeper insights into the practical challenges and experiences associated with e-procurement implementation. The interviews will be recorded (with consent) and transcribed for subsequent analysis.

Focus Groups: Focus group discussions will be held with diverse groups of stakeholders, promoting dialogue and interaction. This format will allow participants to discuss their experiences and perceptions collectively, providing richer qualitative data that may reveal consensus or divergence in views.

Method of Data Analysis

Data analysis will be conducted using both quantitative and qualitative methods:

Quantitative Analysis

The quantitative data collected from surveys will be analyzed using descriptive statistics (such as means and frequencies) and inferential statistics (including MANOVA, t-tests, Chi-square and regression analysis) to identify trends and relationships related to transparency and accountability in procurement processes. Statistical software SPSS will be utilized for this analysis. This detailed approach will enable a robust understanding of the impact of e-procurement on stakeholder perceptions and behaviors.

Qualitative Analysis

Qualitative data from interviews and focus groups will be analyzed using thematic analysis. This involves coding the data to identify recurring themes and patterns that emerge from participants' responses. Thematic analysis allows for a nuanced understanding of the experiences and challenges faced by stakeholders, enriching the quantitative findings. The integration of both quantitative and qualitative results will provide a comprehensive view of the e-procurement system's impact and the challenges faced.

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Model Specification

$$PE = \beta_0 + \beta_1SF + \beta_2EY + \beta_3TO + \beta_4TE$$

Where:

PE = Perceived Effectiveness

SF = Satisfaction

EY = Efficiency

TO = Transparency Opinion

TE = Training Effectiveness

β_0 = Intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ are parameters

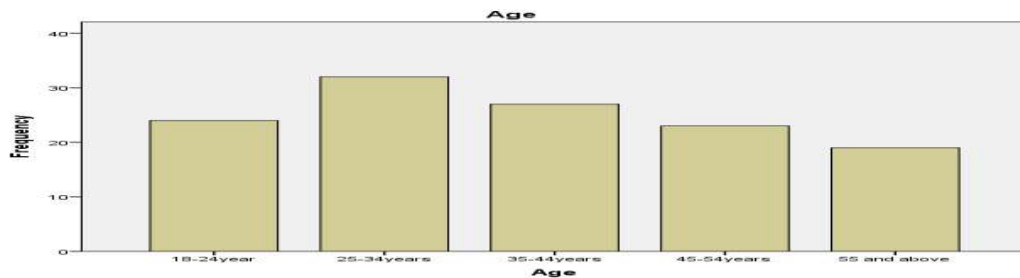
DATA ANALYSIS AND DISCUSSION OF RESULTS

The data used for this study was collected from primary sources using a questionnaire. A total of 150 questionnaires were administered on the targeted population, out of which 125 were returned. The questionnaire contained a total of twenty-eight questions. The data obtained are extracted and presented attribute-wise in the tables below:

Table 1: Age Distribution of Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24year	24	19.2	19.2	19.2
	25-34years	32	25.6	25.6	44.8
	35-44years	27	21.6	21.6	66.4
	45-54years	23	18.4	18.4	84.8
	55 and above	19	15.2	15.2	100.0
	Total	125	100.0	100.0	

Source: Field Survey (2025)



The table and chart together provide a comprehensive view of the age distribution of respondents, highlighting key trends in the data. The majority of participants are in the younger to middle-aged categories, with the 25-34 years age group being the largest, accounting for 25.6% of total respondents. This prominence is clearly reflected in the chart, where this group corresponds to the tallest bar. The second-largest group, 35-44 years, comprises 21.6%, further emphasizing a healthy representation of middle-aged individuals. As we move to the older age brackets, the numbers decline significantly. The 45-54 years group makes up 18.4%, while the 55 and above category consists of 15.2%. This downward trend in representation among older respondents is evident in the shorter bars of the chart, indicating less participation from these age groups.

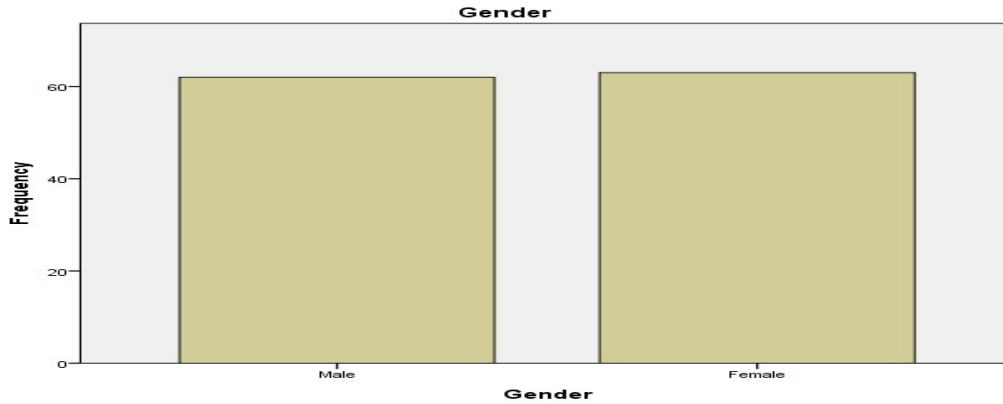
Cumulative percentages reveal that by the 35-44 years age group, 66.4% of respondents has been included, suggesting that a significant portion of the sample is less than 44 years old. By the time we reach the 45-54 years category, 84.8% of respondents are accounted for. This indicates that the bulk of participants are relatively young or middle-aged. Overall, the combination of the table and the chart illustrates that the respondent pool is predominantly younger, reflecting the perspectives and experiences of a younger audience in the context of the e-Procurement system in Edo State. The declining numbers in older age categories may suggest potential barriers to participation or a lack of interest among older demographics. The table and chart together provide a comprehensive view of the age distribution of respondents, highlighting key trends in the data. The majority of participants are in the younger to middle-aged categories, with the 25-34 years age group being the largest, accounting for 25.6% of total respondents. This prominence is clearly reflected in the chart, where this group corresponds to the tallest bar. The second-largest group, 35-44 years, comprises 21.6%, further emphasizing a healthy representation of middle-aged individuals. As we move to the older age brackets, the numbers decline significantly. The 45-54 years group makes up 18.4%, while the 55 and above category consists of 15.2%. This downward trend in representation among older respondents is evident in the shorter bars of the chart, indicating less participation from these age groups.

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Table 2: Gender Distribution of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	62	49.6	49.6	49.6
Female	63	50.4	50.4	100.0
Total	125	100.0	100.0	

Source: Field Survey (2025)

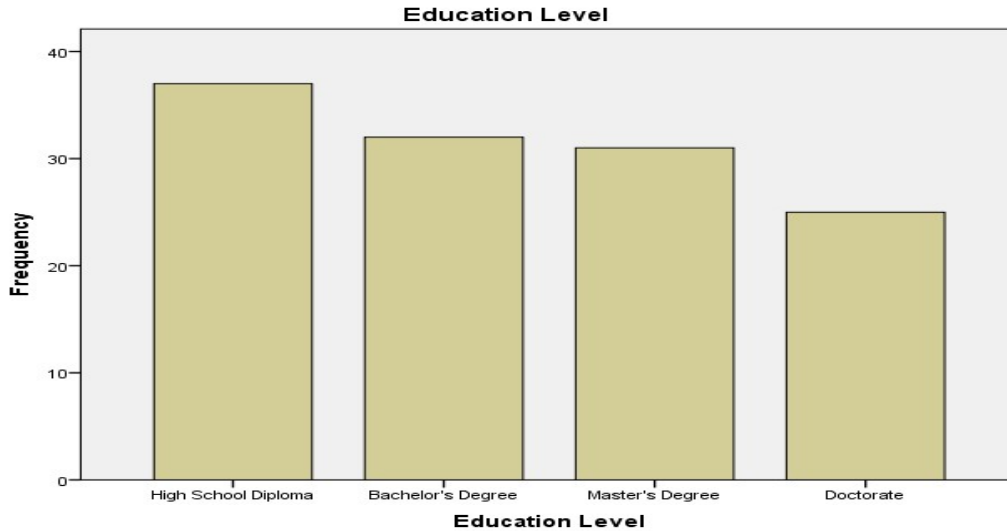


The table and chart together provide a clear overview of the gender distribution among respondents in the study. The results show a nearly even split between male and female participants. Males constitute 49.6% of the total respondents, while females make up 50.4%. This slight predominance of females is evident in both the table and the chart, where the heights of the bars representing male and female respondents are nearly identical, reflecting their close proportions. The total number of respondents is 125, indicating a balanced representation of genders in the sample. The cumulative percentages confirm that all respondents have been accounted for, achieving a total of 100%.

Table 3: Education Level of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid High School Diploma	37	29.6	29.6	29.6
Bachelor's Degree	32	25.6	25.6	55.2
Master's Degree	31	24.8	24.8	80.0
Doctorate	25	20.0	20.0	100.0
Total	125	100.0	100.0	

Source: Field Survey (2025)

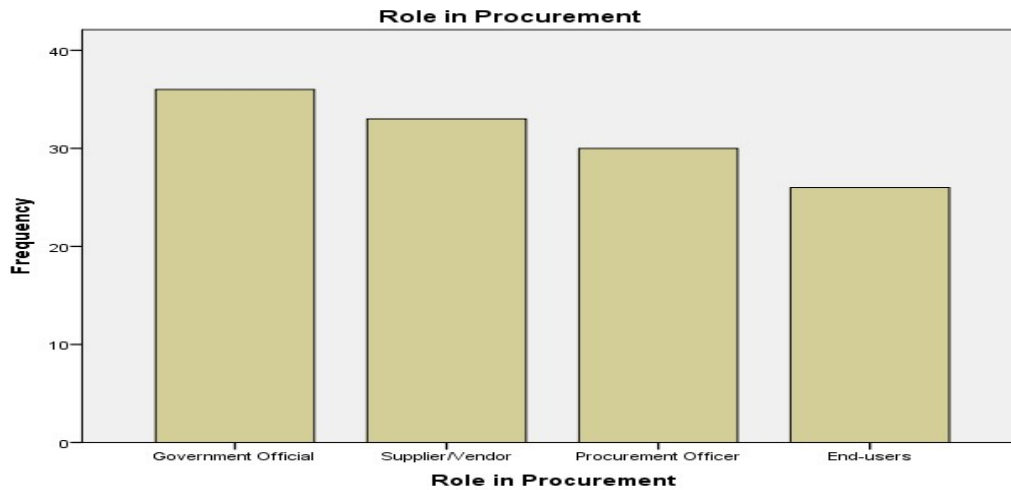


The table and chart provide a detailed overview of the education levels of the respondents in the study. The data reveals that the largest group holds a High School Diploma, comprising 29.6% of the total respondents. This is clearly reflected in the chart, where the bar for this category is the tallest, indicating a significant representation of individuals with this level of education. Following this group, those with a Bachelor's Degree account for 25.6% of respondents, while Master's Degree holders make up 24.8%. This indicates a strong presence of individuals with higher education, as these three categories combined represent over half of the sample. Lastly, Doctorate holders comprise 20.0% of the respondents, completing the educational landscape. The cumulative percentages show that by the time we include respondents with a Master's Degree, 80.0% of the total has been considered, illustrating a well-educated sample. The total number of respondents is 125, confirming a comprehensive representation of educational backgrounds.

Table 4: Role in Procurement of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
Government Official	36	28.8	28.8	28.8
Supplier/Vendor	33	26.4	26.4	55.2
Procurement Officer	30	24.0	24.0	79.2
End-users	26	20.8	20.8	100.0
Total	125	100.0	100.0	

Source: Field Survey (2025)



The table and chart together provide a clear view of the roles of respondents in the procurement process. The largest group of participants identifies as Government Officials, making up 28.8% of the total respondents. This is visually represented in the chart, where the bar for Government Officials is the tallest, indicating their significant representation in the study. Following closely are Suppliers/Vendors, who account for 26.4% of respondents. This group plays a crucial role in the procurement ecosystem, emphasizing the importance of their perspectives. The Procurement Officers make up 24.0%, while End-users comprise 20.8% of the respondents.

The cumulative percentages indicate that by the time we include Suppliers and Procurement Officers, 79.2% of the total sample has been accounted for, suggesting a strong focus on individuals directly involved in procurement activities. With a total of 125 respondents, the distribution of roles highlights a diverse range of perspectives from different stakeholders within the procurement process. This diversity is essential for understanding the various viewpoints and experiences related to the e-Procurement system in Edo State, potentially enriching the study's findings.

Table 5: Years of Experience of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 1year	25	20.0	20.0	20.0
1-3 years	23	18.4	18.4	38.4
4-6years	22	17.6	17.6	56.0
7-10years	29	23.2	23.2	79.2
More than 10 years	26	20.8	20.8	100.0
Total	125	100.0	100.0	

Source: Field Survey (2025)



The table and chart together illustrate the years of experience among respondents in the study. The largest group comprises individuals with 7-10 years of experience, accounting for 23.2% of the total respondents. This significant representation is reflected in the chart, where this category features the tallest bar, indicating a robust level of experience. Following closely are respondents with More than 10 years of experience, making up 20.8% of the total. This is indicative of a solid base of experienced individuals contributing to the findings. The Less than 1 year category includes 20.0%, while those with 1-3 years of experience account for 18.4%. Lastly, individuals with 4-6 years of experience represent 17.6%. The cumulative percentages show that by the time we reach respondents with 4-6 years of experience, 56.0% of the participants have been accounted for. This indicates a good mix of experience levels among respondents, reflecting a range of perspectives from both less experienced and seasoned professionals.

Objective 1: Investigate additional benefits and challenges of e-procurement beyond transparency and regulatory frameworks, including cost savings, supplier relationships, and the overall impact on public service delivery

Table 6: General Linear Model Results

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.895	423.182 ^b	2.000	99.000	.000
	Wilks' Lambda	.105	423.182 ^b	2.000	99.000	.000
	Hotelling's Trace	8.549	423.182 ^b	2.000	99.000	.000
	Roy's Largest Root	8.549	423.182 ^b	2.000	99.000	.000
CS	Pillai's Trace	.062	.796	8.000	200.000	.607
	Wilks' Lambda	.939	.791 ^b	8.000	198.000	.611
	Hotelling's Trace	.064	.786	8.000	196.000	.616
	Roy's Largest Root	.048	1.207 ^c	4.000	100.000	.312
SR	Pillai's Trace	.053	.681	8.000	200.000	.708
	Wilks' Lambda	.948	.676 ^b	8.000	198.000	.713
	Hotelling's Trace	.055	.670	8.000	196.000	.718
	Roy's Largest Root	.036	.901 ^c	4.000	100.000	.466
CS * SR	Pillai's Trace	.215	.753	32.000	200.000	.829
	Wilks' Lambda	.795	.750 ^b	32.000	198.000	.832
	Hotelling's Trace	.244	.747	32.000	196.000	.835
	Roy's Largest Root	.163	1.018 ^c	16.000	100.000	.444

a. Design: Intercept + CS + SR + CS * SR

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

The results from the Multivariate Tests provide a comprehensive view of the effects of Cost Savings and Supplier Relationships on the dependent variables related to public service delivery.

Firstly, the intercept shows a strong significance, indicated by a Pillai's Trace value of 0.895 and an F-statistic of 423.182, with a p-value of 0.000. This suggests that the overall model significantly predicts the dependent variables when accounting for other factors. In other words, there is a meaningful foundation for understanding the data.

However, when examining the specific effects of the independent variables, we find that neither Cost Savings nor Supplier Relationships demonstrate significant impacts. The analysis for Cost Savings yields a Pillai's Trace of 0.062 and an F-statistic of 0.796, with a p-value of 0.607. This high p-value indicates that changes in Cost Savings do not lead to statistically significant differences in the outcomes being measured. Similarly, the results for Supplier Relationships show a Pillai's Trace of 0.053 and an F-statistic of 0.681, accompanied by a p-value of 0.708. Again, this suggests that variations in Supplier Relationships do not significantly affect the dependent variables.

Furthermore, the interaction between Cost Savings and Supplier Relationships, assessed through the combined variable (CS * SR), also fails to produce significant results. With a

Pillai's Trace of 0.215 and an F-statistic of 0.753, the p-value of 0.829 indicates that the interaction does not contribute meaningfully to the understanding of the dependent outcomes.

In summary, while the overall model is significant at the intercept level, the individual contributions of Cost Savings and Supplier Relationships, as well as their interaction, are not statistically significant. This suggests that other factors may be influencing the outcomes of e-procurement, and further investigation into additional variables or contextual influences may be necessary to gain a clearer understanding of its benefits and challenges

Table 9: Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Stakeholder Group	3.014	.088	-.592	55	.556	-.24621	.41583	-1.07954	.58712
Equal variances assumed			-.576	44.308	.568	-.24621	.42748	-1.10757	.61515
Equal variances not assumed									

The Independent Samples Test results for "Stakeholder Group" indicate that there is no significant difference between the means of the two groups being compared. The Levene's Test for Equality of Variances yields a p-value of 0.088, suggesting that the assumption of equal variances is not fully met but still acceptable for interpretation. The t-test results show a t-value of -0.592 with a p-value of 0.556, indicating that the difference in means is not statistically significant, as the p-value exceeds the typical threshold of 0.05.

To effectively address resistance to change in the context of e-procurement, it is essential to develop comprehensive strategies that tackle infrastructure limitations, cultural barriers, and the need for effective training and support. First, addressing infrastructure limitations involves assessing and upgrading the technological resources available to stakeholders. This may include providing necessary hardware, software, and internet access to ensure that all users can comfortably engage with the e-procurement system. Additionally, establishing a reliable IT support system can alleviate concerns related to technical issues, ensuring that stakeholders feel supported during the transition.

Cultural barriers can be mitigated by fostering an organizational culture that embraces change and innovation. Leadership should actively communicate the benefits of the e-procurement system, highlighting positive outcomes such as increased efficiency and improved supplier

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relationships. Engaging stakeholders in the decision-making process can also help build trust and promote a sense of ownership over the new system. Effective training and support are crucial to overcoming resistance. Implementing comprehensive training programs tailored to different user groups can enhance familiarity and confidence with the new system. Ongoing support should be provided through workshops, tutorials, and accessible resources, allowing stakeholders to seek help as needed. Creating a feedback loop where stakeholders can share their experiences and suggestions can help refine the training process and improve overall satisfaction.

Objective 3: Investigate technical issues related to infrastructure and internet access, proposing practical solutions and mitigation strategies to enhance system functionality.

Table 10: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	7.636 ^a	4	.106
Likelihood Ratio	7.741	4	.102
Linear-by-Linear Association	6.254	1	.012
N of Valid Cases	125		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.35.

The Chi-Square Tests results indicate that while the Pearson Chi-Square value is 7.636 with a p-value of 0.106, suggesting no significant association overall, the Linear-by-Linear Association shows a significant p-value of 0.012. This indicates some level of association that warrants further exploration, particularly regarding stakeholder perceptions or behaviors.

When investigating technical issues related to infrastructure and internet access, it's essential to recognize how these factors can impact the functionality of an e-procurement system. Poor infrastructure can lead to slow performance, frequent downtimes, and overall user dissatisfaction, which may hinder adoption.

To address these issues, several practical solutions can be proposed. First, conducting a thorough assessment of the current infrastructure is crucial. This includes evaluating hardware, software, and network capabilities to identify any gaps. Upgrading outdated equipment and ensuring that systems meet the necessary specifications for optimal performance can significantly improve functionality. Improving internet access is another critical area. Organizations can explore options such as partnering with local internet service providers to ensure reliable and high-speed connectivity. In areas where internet access is limited, implementing alternative solutions like mobile hotspots or satellite internet can help bridge the gap.

Additionally, establishing a robust IT support system is vital. This includes providing training for IT staff to effectively manage the e-procurement system, as well as creating a helpdesk for users to report issues and seek assistance. Regular maintenance checks and updates can further enhance system reliability. Mitigation strategies should also include creating backup systems and data recovery plans to protect against potential outages or data loss. Encouraging feedback from users about technical difficulties can guide continuous improvements and adjustments to the system.

Table 11: ANOVA Result

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.536	4	.634	.503	.734 ^b
	Residual	151.352	120	1.261		
	Total	153.888	124			

a. Dependent Variable: Perceived Effectiveness

b. Predictors: (Constant), Training Effectiveness, Satisfaction, Transparency Opinion, Efficiency

The ANOVA results for the regression model assessing the factors influencing perceived effectiveness reveal that the overall model is not statistically significant. The regression sum of squares is 2.536, with a mean square of 0.634 and an F-value of 0.503. The p-value associated with this F-statistic is 0.734, which is well above the conventional threshold of 0.05, indicating that the predictors—Training Effectiveness, Satisfaction, Transparency Opinion, and Efficiency—do not collectively explain a significant amount of variance in perceived effectiveness.

This lack of significance suggests that while these factors may be important in theory, they may not be effectively influencing stakeholder perceptions in practice. To enhance the e-procurement system's perceived effectiveness, it is crucial to delve deeper into the specific areas of dissatisfaction or misunderstanding among users. Improving stakeholder engagement through targeted training and clearer communication about the benefits and functionalities of the system can help address these issues. Additionally, conducting qualitative research, such as interviews or focus groups, can provide insights into the specific challenges users face and inform necessary adjustments to the system or its implementation. Ultimately, fostering a user-centered approach that prioritizes stakeholder needs and feedback can lead to improvements in perceived effectiveness, thereby enhancing the overall success of the e-procurement system in achieving its intended goals.

Table 12: Regression Coefficient Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.507	.404		6.208	.000
Satisfaction	.028	.072	.035	.386	.700
Efficiency	-.065	.070	-.086	-.932	.353
Transparency Opinion	.068	.068	.092	1.010	.314
Training Effectiveness	.019	.069	.025	.275	.784

a. Dependent Variable: Perceived Effectiveness

The coefficients provided reveal insights into the factors influencing the perceived effectiveness of the e-procurement system. The constant term is significant ($p < 0.001$), indicating a strong baseline for perceived effectiveness. However, the individual predictors—Satisfaction, Efficiency, Transparency Opinion, and Training Effectiveness—do not show significant relationships with perceived effectiveness, as all have p-values well above the 0.05 threshold. To conduct a thorough evaluation of the e-procurement system's effectiveness in enhancing transparency, efficiency, and accountability in public procurement processes, it is essential to consider both quantitative data and qualitative feedback from users.

Discussion of Findings

The study on the implementation of an Electronic Procurement (e-Procurement) system in Edo State, Nigeria, provides valuable insights into the challenges and perceptions surrounding this initiative. E-procurement is widely recognized for its potential to enhance transparency, efficiency, and accountability within public procurement processes. However, the findings suggest that stakeholders in Edo State may not fully appreciate these benefits, indicating a significant gap between the theoretical advantages of e-procurement and the actual experiences of users.

The ANOVA results highlight that key predictors—such as Training Effectiveness, Satisfaction, Transparency Opinion, and Efficiency—do not significantly influence perceived effectiveness ($p = 0.734$). This lack of statistical significance suggests that while these factors are ostensibly important, they may not be effectively translating into stakeholder perceptions in practice. The disconnect could stem from several areas, including inadequate training, insufficient communication regarding the system's functionalities, or even a lack of awareness about the potential benefits of e-procurement.

Resistance among stakeholders emerges as a significant barrier to the successful implementation of the e-procurement system. Factors such as technological unfamiliarity, fear of job displacement, and skepticism about the system's efficacy contribute to this resistance. This aligns with recent literature that underscores the psychological and cultural dimensions of

adopting new technologies. Stakeholders may feel anxious about using unfamiliar tools and processes, leading to reluctance in embracing change.

CONCLUSION AND RECOMMENDATIONS

This study aimed to explore the challenges and perceptions surrounding the implementation of an Electronic Procurement (e-Procurement) system in Edo State, Nigeria. The key findings can be summarized as follows:

The analysis revealed a significant lack of perceived effectiveness among stakeholders. Despite the theoretical advantages of the e-procurement system, users do not see it as enhancing their procurement processes. This disconnect suggests that the anticipated benefits are not being realized in practice. Resistance to change emerged as a major barrier to successful implementation. Factors such as technological unfamiliarity, fear of job displacement, and skepticism about the system's capabilities contribute to user reluctance. This resistance hampers overall acceptance and engagement, preventing stakeholders from fully benefiting from the system. Infrastructure and technical challenges were identified as critical issues affecting the e-procurement system's functionality. Poor infrastructure and limited internet access lead to slow performance and user dissatisfaction, further exacerbating resistance among stakeholders.

The evaluation of the system's effectiveness in enhancing transparency, efficiency, and accountability yielded mixed results. Although the system is designed to improve these aspects, many stakeholders reported not perceiving significant changes, indicating a need for better communication and user engagement. Lastly, the findings underscored the necessity for targeted training programs tailored to the specific needs of different user groups. Effective training can significantly enhance user confidence and reduce resistance to adopting the new system.

The research study recommended the following:

- i. Enhance training program: Develop comprehensive training initiatives tailored to different user groups to improve digital literacy and familiarity with the e-procurement system. Ongoing support and resources should be provided to reinforce learning.
- ii. Engage stakeholders policy: Foster a participatory approach by involving stakeholders in the decision-making process surrounding the e-procurement implementation. Regular feedback mechanisms, such as surveys and focus groups, can help identify concerns and facilitate a sense of ownership.
- iii. Improve infrastructure: Conduct thorough assessments of existing technological infrastructure and partner with local internet service providers to enhance connectivity. Investments in necessary hardware and software upgrades are crucial for ensuring optimal system performance.

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