ADOPTION OF E –PROCUREMENT SYSTEMS ON ORGANIZATIONAL PERFORMANCE OF SMES IN UGANDA: A CASE STUDY OF NAKAWA DIVISION

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UGANDA CHRISTIAN UNIVERSITY
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DECLARATION

I Ndawula Mubarak, declare that this work is authentically mine and to the best of my knowledge. This report contains no traces of plagiarism or any other unethical practices. The only work used that has already been published by other persons has been purely for reference purposes.

Signature..... Date...7th/Sep/2024

APPROVAL

I certify that Ndawula Mubarak , a student of Bachelors of procurement and logistics at Uganda Christian University submitted her research findings under my supervision.

Supervisor: Ms. Rachael Nasuuna

Signature……Rach…… Date…06/09/2024……

DEDICATION

I dedicate this research report to my beloved mother Ms.Kirungi Jannat who has tirelessly supported me financially and ethically for the entire time I pursed this course and her endless efforts to see me educated. May the heavenly Father bless her for that kindness and love for me.

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ABSTRACT

This dissertation aimed to explore the effect of e- procurement systems on organizational performance within small and medium enterprises, dealing in different business in Uganda. The study sought to achieve three specific objectives: to examine the effect of adoption of e procurement systems on organizational performance, to examine the effect of data security on organizational performance and to investigate the supplier readiness on e-procurement systems on organizational performance. To achieve these objectives, a mixed-methods research approach was adopted. Data was collected through a pre-tested close ended questionnaires and interviews with staff at multiple small and medium enterprises and different departments like logistics, procurement, ICT, and others.

The study revealed a strong positive correlation between the adoption of e-procurement systems on organizational performance, with a significant relationship between the two. The research results suggested that the consistent use of digital procurement tools like e-auctioning, e-tendering, data security and effective management practices is very crucial for enhancing the performance of Small and medium enterprises in Nakawa Division.

Data was collected using self-administered questionnaires. This study employed both stratified sampling and simple random sampling techniques to select the sample size of 100 respondents that were involved in the study. The findings of this study revealed that embracement of electronic procurement contributes to the organization in different ways and that E-procurement systems contributes organizational performance inform of increasing Profit margins, enhancing operational efficiency, data security and promoting supplier relationships, The study also recommends that SMES should continue utilizing e-procurement systems to enhance operational efficiency, supplier relationship management, and overall organizational performance especially with in its procurement processes. Small and medium enterprises should also invest in advanced e-tendering software that offers greater customization and analytics capabilities in order to allow better monitoring of procurement activities.

CHAPTER ONE

1.0 Introduction

In today's interconnected global economy, efficient and effective procurement processes are essential for businesses to remain competitive. Traditional manual procurement methods are increasingly inadequate to meet the demands of modern organizations, which require greater efficiency, transparency, and cost-effectiveness. As a result, many organizations have turned to digital transformation initiatives, particularly in procurement.

E-procurement, the adoption of digital technologies to support sourcing, vendor management, and buying activities, offers numerous benefits such as increased regulatory compliance, supply base rationalization, and enhanced value chain transparency. It represents a paradigm shift from viewing procurement as a mere operational task to a strategic lever for achieving business objectives.

While some countries have made significant strides in e-procurement adoption, others, including Uganda, lag behind due to socioeconomic disparities and technological infrastructure limitations. The government of Uganda has recognized the importance of digital governance and has implemented policies to promote e-procurement, but challenges such as integration complexities, data security risks, and regulatory compliance issues persist, particularly for small and medium enterprises (SMEs).

This study aims to investigate the barriers and opportunities facing Ugandan public procurement entities (PDEs) in adopting e-procurement. By understanding these factors, policymakers, practitioners, and stakeholders can develop strategies to effectively leverage e-procurement for sustainable development and economic growth in Uganda.

1.1 Background of the Study

In today's networked world economy, each business has an urgent need to economize its procurement processes in such a way that it is able to deliver goods and services to its consumers on time. Traditional procurement methods, based largely on manual intervention, have thus been

grossly insufficient to keep pace with the requirements of efficiency, transparency, and cost-effectiveness. Consequently, many organizations around the world have adopted digital transformation initiatives, especially in procurement. This transition, better known as e-procurement, involves the adaptation of digital technologies to support sourcing, vendor management, and buying activities. Some of the benefits available with e-procurement include increased procurement regulation adherence, supply base rationalization, and increased value chain transparency in procurement. It represents a paradigm shift from seeing procurement as an operational task to a lever of strategy in meeting business objectives.

In Africa, particularly East Africa, the adoption of e-procurement across countries varies significantly. While some countries have made sufficient strides in integrating digital technologies into procurement processes, others, including Uganda, still remain quite behind. This has been partly influenced by the prevailing socioeconomic diversities and differences in levels of technological infrastructure. On this note, e-procurement remains a challenge for both the public and private sectors within Uganda. According to the Public Procurement and Disposal of Assets Act (2003), electronic means shall be employed for procurement. This was supposed to help in enhancing efficiency, transparency, and accountability in procurement. Despite such a legislative framework, manual procurement systems still dominate, especially among Small and Medium Enterprises. Such retrogressive practices lead to increased transaction costs and weakened service delivery.

The Government of Uganda has adopted policies that favor digital governance through policies such as the National Electronic Government Framework of 2010. This framework has indicated the adoption of technology to realize efficient service delivery and accountability in public procurement. However, the complications of integration, data security risks, and regulatory compliance issues remain a challenge to its full-scale adoption, especially for SMEs, till today. Thus, this paper assesses the barriers and opportunities facing Ugandan PDEs in adopting e-procurement.

1.2 Statement of the Problem

While the adoption of e-procurement holds immense potential for organizations seeking competitive advantages, greatly improving efficiency, visibility, and collaboration across procurement processes, most of the e-procurement processes are fraught with challenges in small and medium enterprises. The adoption of the e-procurement process in SMEs is afflicted with inefficiency, lack of transparency, and corruption. These have resulted in poor service delivery, mismanagement of finances, and eroded public trust in SMEs. While several attempts have been made to enhance such transition, previous studies obtained inconsistent findings from Mafukata and Mapuva (2020), making it difficult to fully understand the adoption of e-procurement systems on organizational performance of SMEs; hence there is a need for further studies into this area.

1.3 Main Objective of the Study

The main objective of the study was to examine the effect of the adoption of e-procurement systems on the organizational performance of small and medium enterprises (SMEs) in Nakawa Division.

1.4 Objectives of the study

i.) To assess the effect of the integration of e-procurement systems on the organizational performance of SMEs in Nakawa division, Uganda.

ii.) To analyze the effect of data security in e-procurement systems on the organizational performance of SMEs in Nakawa division, Uganda.

iii.) To examine the effect of supplier readiness in e-procurement systems on the organizational performance of SMEs in Nakawa division, Uganda.

1.4 Research Questions

i.)What is the effect of the integration of e-procurement systems on the organizational performance of SMEs?

ii) What is the effect of data security in e-procurement systems on the organizational performance of SMEs?

iii) What is the effect of supplier readiness in e-procurement systems on the organizational performance of SMEs?

1.6 Significance of the Study

The study enhanced the capacity of SMEs in the adoption and usage of e-procurement. It is also expected that the study helped business owners and managers to plan and manage their companies, particularly with regards to e-procurement. They were able to identify which e-procurement processes and technologies are to be adopted and utilized.

The findings of the study were useful for procurement practitioners and decision-makers both in government and the business community, as they provide insights into why SMEs fail to adopt e-procurement processes despite their vital role in survival and operations.

Moreover, it is hoped that the research would contribute to the knowledge of academics and researchers about the procurement practices of SMEs and how these influence their performance.

The findings of the research are finally expected to contribute to the existing knowledge regarding the issue at hand about e-procurement and its impact on SMEs.

1.7 Scope of the Study

1.7.1 Content Scope

The research focused on SMEs, specifically those engaged in wholesale and retail trade activities in Nakawa Division. This focus was chosen to provide a specific focus on procurement practices within this economic sector and geographical boundary.

1.7.2 Geographical Scope

The research was conducted in Nakawa Division within Kampala District.

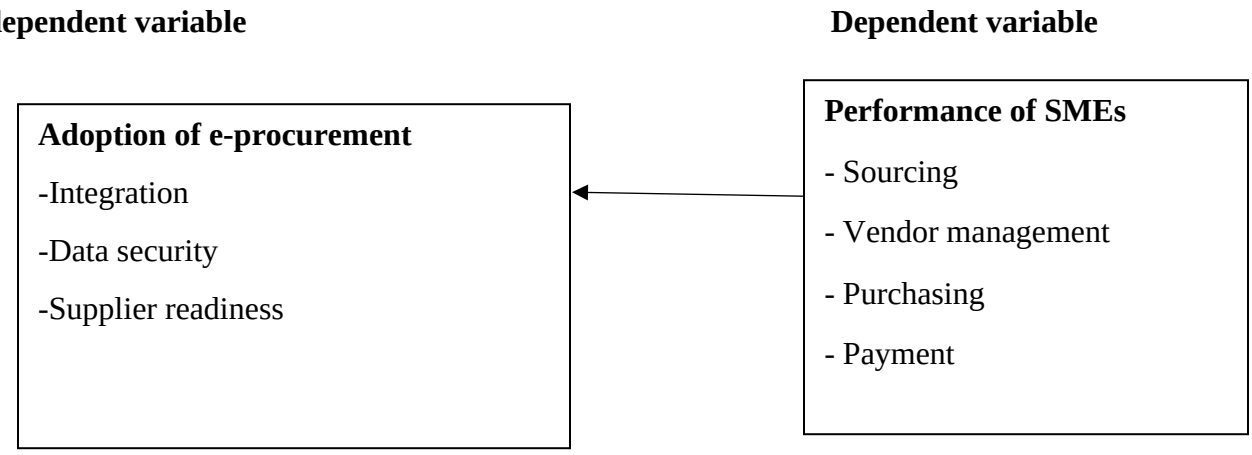
1.7.3 Timescope

The study considered SMEs that had been in existence for more than five months. This period was selected to ensure that the researcher could obtain coherent information from the respondents

.1.8 Conceptual Framework

The conceptual framework illustrates the proposed causal linkages among a set of variables related to the particular problem. The boxes represent the variables, and the arrows show the relationship between them. This conceptual framework analyzes the effect of the adoption of e-procurement systems on the organizational performance of small and medium enterprises. Thus, the foregoing conceptual framework indicates how the independent variable of the study, which is the adoption of e-procurement systems, relates to the dependent variable, organizational performance.

Figure 1: Conceptual Framework



Source: journal of business Research year 2021

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1.9 Limitations of the Study

Even though this study aims to establish the effect of e-procurement adoption on SME organizational performance in Nakawa Division, Kampala District, there are several limitations

that could impact the findings and conclusions. Firstly, generalization of results was limited because the focus was on only one geographical area, those being the SMEs in the wholesale and retail trade sector. This narrow scope did not depict the full composition of SMEs across different sectors or regions of Uganda.

For instance, the dependency on self-reported data from SMEs included in the study might conceal several response biases and inaccuracies since the actual variations in respondents' subjective understandings of e-procurement systems and organizational performance measures may influence the reliable and valid measurement of findings.

Thirdly, exogenous variables such as economic conditions, regulatory and technological changes may impact the adoption and outcomes of e-procurement systems in ways that are beyond the scope of this study. These could confound the relationships being examined within the conceptual framework.

The duration of the study might finally delimit its ability to portray long-term effects of e-procurement adoption on organizational performance. A longitudinal study would be greatly beneficial in understanding more about how these relationships unfold over time.

Notwithstanding the above-mentioned limitations, this study shall try to present potential useful insights into the level of diffusion of e-procurement systems among SMEs and its potential implications for organizational performance within the specific context of Nakawa Division, Kampala District.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature on the adoption of e-procurement and its impact on the organizational performance of SMEs. It begins with a definition of e-procurement, followed by a theoretical review, a literature review based on the study's objectives, a research gap analysis, and concludes with a summary.

2.1 Definition of E-Procurement

E-procurement is the use of advanced technology, the internet, and networking systems for procurement. It encompasses transactions conducted through online systems or over digital networks and platforms, representing a broad range of activities facilitated by modern technologies and business-vendor partnerships. E-procurement involves the use of ICT throughout the buying phase, from requirement identification to payment and contract management. It is important to note that e-procurement does not include older applications involving telephone ordering but does involve the use of the internet, intranet, and extranet applications throughout the purchasing process.

Additionally, e-procurement involves online purchases of goods and services for daily business operations, as well as the approval of the entire process with the goal of cost reduction. Proper implementation of e-procurement does not merely facilitate online purchasing but also links organizations and their business operations with suppliers and regulates all communications between them (Saastamoinen et al., 2018).

2.2 Theoretical Review

This section reviews prominent theories related to procurement systems, focusing on adoption theory and its connection to e-procurement concepts. It provides an overview of adoption theories, assumptions, relevance, criticisms, and their linkages with e-procurement systems.

2.2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model, first proposed by Davis in 1989, theoretically frames how users come to accept and use technology. TAM postulates that perceived usefulness (PU) and perceived ease of use (PEOU) are the pivotal determinants in influencing an individual's intention to use and actual usage behavior of a technology. This model is particularly applicable to the adoption of e-procurement among SMEs, as it focuses on the factors affecting organizational members' acceptance of technological innovations.

Research involving the use of TAM in the e-procurement domain has identified perceived usefulness as a predictor of attitude toward the adoption of electronic procurement systems. SME owners and employees are more likely to adopt the system when they perceive it to improve procurement efficiency, lower costs, enable better decision-making, and facilitate closer relationships with suppliers (Venkatesh & Davis, 2000).

In addition, perceived ease of use also plays a significant role in the adoption process. If the e-procurement systems are perceived to be user-friendly and easily integrated within the current procurement practices with no extensive training or technical expertise, then their adoption is more likely (Venkatesh et al., 2003).

More recent studies have continued to support TAM's applicability in explaining the dynamics of adopting e-procurement. For instance, Saastamoinen et al. (2018) adopted TAM in investigating the adoption of e-procurement systems in organizational procurement processes and proved its efficiency in predicting the behavior of technology adoption. Similarly, Bag et al. (2020) posited that perceived usefulness and perceived ease of use play an important role in adopting e-procurement technologies among SMEs.

The aim of this study is to explain how perceived usefulness and perceived ease of use influence the adoption of e-procurement systems among SMEs in Nakawa Division, Kampala District, using the TAM theoretical framework. This led to the exposure of underlying motivations and deterrents that shape the drive toward adoption with related organizational performance regarding e-procurement implementation.

2.3 Literature Review Based on Objectives of the Study

2.3.1 Supplier Integration and Organizational Performance

Supplier integration involves a corporation reaching out and working with its suppliers to establish an appropriate supply flow. Through integration, a long-term relationship between a corporation and its suppliers is developed. Collaboration or integration has been identified as one of the most important building blocks of SCM. By integrating with a supplier, a business partner may be involved in the early stages of product development or consulting.

Partnering represents a shift from the customary pressures that larger customers apply on small and medium-sized businesses that have previously been dismissed as irrelevant. The partnership seeks to transform the adversarial, short-term customer-supplier relationships, focusing on buying, procurement, lower prices, and better delivery, into long-term collaboration with low LAC, few supplies, quick product life cycles, concentration on the core business, and printing with a narrow range. The suppliers brought on board a product launch and introduction by a merger. This deeper level of integration is required to enhance supply chain performance.

Most organizations face problems in on-time delivery, whereas integration with suppliers allows companies to share their order and inventory information with their vendors. It may also be supported that the integration with suppliers contributed to effective communication, information sharing, and cooperation with suppliers, all crucial elements in reducing upstream complexity.

In fact, supplier integration provided increased responsiveness, flexibility, and time-saving. The other advantages of the same are reducing transaction costs through a reduction in manufacturing cost and uncertainty. It also improved the operational performance of an enterprise. Correspondingly, the integration of suppliers drastically lowers opportunistic behavior in support of mutual visions and cooperationist objectives between the parties. On their part, suppliers can be brought together and share information on orders and inventory with the companies. Another measure that can help reduce upstream complexity is the integration of suppliers, entailing good communication, information sharing, and collaboration with the suppliers themselves. This is according to studies by Madzimure et al. (2020) and Zhao et al. (2015).

Increased responsiveness, flexibility, and time saved are some of the benefits of integrating suppliers. It also minimizes transaction costs through reduced uncertainty and slashes production costs, leading to improved operational performance. Most SMEs have continued to grapple with issues of on-time delivery. On the other hand, through integration with suppliers, SMEs can possibly offer orders and inventory information to suppliers. On the other hand, supplier integration can refer to appropriate communication, information sharing, and collaboration with suppliers, which may reduce the upstream complexity cited by Zhao et al. (2015).

The benefits of supplier integration include enhanced responsiveness, flexibility, and timesaving. Supplier integration also plays a role in reducing transaction costs by decreasing uncertainties and production cost-cutting, leading to improved operational performance. In supplier integration, shared visions and cooperative goals significantly reduce opportunistic behaviors. It has been suggested that sharing risks and business information-including demand forecasts, inventory level, and production planning decisions-and synchronization of business processes-might enhance positive organizational performance due to integration within firms. While the latter researches the substantial and documented relationship between integration and SMEs' performance-as confirmed by Kristal et al. (2020)-it confirms that integration can be transformed into competitive capabilities, contributing to positive SCP. More importantly, this positive relationship between supplier integration and SCP has been confirmed by several studies such as those of Bowersox, Closs, & Stank, 2019; Childerhouse & Towill, 2018; Flynn et al., 2020; Frohlich & Westbrook, 2021; Zhao et al., 2019, in which convincing empirical evidence was found for the relation between the two constructs.

2.3.2 Data Security in E-Procurement and Organizational Performance

According to Albinkali, 2021, procurement has several key roles to play. These include the selection of appropriate ICT tools to facilitate smooth processing in procurement. In vendor and partner selection, data security in e-procurement should be a consideration. From the point of view of a vertical, EPS supports the needs of modules coming in and those going out and also the inter-organizational modules. It connects via the gateway of the company's IT system to the IT systems of suppliers and buyers. IT infrastructure, IT knowledge, B2B knowledge, company size, disposition of business partners, successful implementation of competitors, and acceptance among

competitors are important factors in the introduction of the PSA. Fixed range does not distinguish EPS users from non-users because there is little difference between EPS users and non-users. The factors influencing implementation are not equal regarding the explanation of the significance of the acquisition of EPS by the company. According to Soares-Aguiar and Palma dos Reis (2018), the most explanatory factor is experience in computer science and size of company, being the highest standard due to the importance of classifying the introduction of electronic procurement systems. Whereby it observes that IT infrastructure and business-to-business knowledge is very crucial, another important aspect is the disposition of business partners in implementing the electronic acquisition systems.

In conclusion, they asserted that professional organizations are more likely to adopt an electronic purchasing system than organizations offering production and services. Because of this, a company with more developed IT infrastructures, IT experiences, and B2B knowledge is more interested in adopting an electronic acquisition system. In addition, the availability of business partners would also provide the way for introducing electronic procurement systems. Even those competitors that have been doing very well and stand to benefit from the introduction of electronic acquisition systems urged other firms or their rivals to similarly develop electronic acquisition systems.

Hoong & Lin, 2017, in his contribution, highlighted the core contribution of electronic contracting in the processes of procurement. The trendsetting development has especially enhanced the security and transparency of information. This is where integration with e-procurement systems introduces secure digital platforms that encrypt sensitive procurement data and ensure access to authorized personnel only to critical documents, including bid information, the terms of contracts, and payment details.

This technological development reduces certain risks of data compromise or unauthorized access commonly found in paper documentation. Fifthly, Cooper & Schindler (202

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the methodology that was employed in this study to establish the effect of e-procurement adoption on the organizational performance of SMEs in Nakawa Division, Kampala District. It encompasses issues regarding research design, study population, techniques of sampling, data collection methods, and procedures for data analysis used in this study.

3.1 Research Design

This study adopted a mixed-methods approach, combining qualitative and quantitative methods in an attempt to comprehensively explore and analyze the relationship between e-procurement adoption and SME performance. In this respect, the study used a descriptive and cross-sectional survey design to collect data at a particular point in time, thus providing a snapshot of present perceptions and current outcomes of e-procurement.

3.2 Study Population

The study population comprised of 250 SMEs within Nakawa Division, Kampala District. These were targeted so that reliable comparisons can be made between SMEs that have adopted and those that have not adopted e-procurement systems. This was deemed an adequate sample size to obtain meaningful variance of opinions from owners, managers, and employees involved in procurement and provide a fair analysis of the impact of e-procurement on organizational performance in the context of Nakawa Division. To this end, the balance of participants in both groups was sought in a manner that ensures the findings of the study are robust and generalize to the wider SME population in the area.

3.3 Sample size Determination

The sample size is 152 was determined using the krjce and Morgan table of 1970

3.4 Sampling Technique

The study employed a stratified sampling technique to ensure a representative sample of SMEs in Nakawa Division. This method divided the population into two strata based on their e-procurement

adoption status. Stratification allowed for proportional representation of adopters and non-adopters, ensuring that the study captured the characteristics of both groups and enabled accurate comparisons of organizational performance. Within each stratum, simple random sampling was used to select SMEs for participation, further reducing selection bias and enhancing generalizability. This combined approach enhanced both reliability and validity, providing a solid foundation for analyzing the impact of e-procurement on SMEs in the division.

3.4 Data Collection

3.4.1 Sources of Data Collection

The study was based on both primary and secondary data:

Primary data comprised of information from interviews and questionnaires administered to owners, managers, and employees of SMEs. This shall include perceptions, experiences, and quantitative data relating to performance metrics.

Secondary Data: Pre-existing data from the literature, reports, and studies associated with e-procurement adoption and SME performance. This established a theoretical framework for a basis of comparison.

3.4.2 Methods of Data Collection and Instruments

Questionnaires were structured to capture quantitative data on the level of adoption of e-procurement systems, benefits realized, challenges encountered, and associated performance indicators. Observation are the direct observation of the procurement processes in SMEs that complements data from questionnaires and interviews by providing a practical understanding of how e-procurement systems are integrated and used.

3.5 Data Analysis

Data was analyzed through both quantitative and qualitative methods accordingly. Quantitative Analysis of descriptive statistics, correlation analysis, and regression analysis was done to check the relationship that may exist between factors of e-procurement adoption and performance

metrics. Thematic analysis was used to identify and interpret the patterns and themes emerging from interview transcripts and observational notes for further insight into the qualitative aspects.

3.5.1 Data Quality Control

The study used a stratified sampling technique to select a representative group of SMEs in Nakawa Division. This method divided the SMEs into two groups: those that had adopted e-procurement systems and those that hadn't. This ensured that the study included a balanced mix of both groups, allowing for a fair comparison of their performance. Within each group, we randomly selected SMEs to participate, further reducing bias and ensuring that the results were representative.

We chose data collection methods that would provide reliable and valid information. For example, we used structured interviews with standardized questions to ensure consistency and reliability. We also conducted observations to gather more detailed information about the SMEs' operations. These methods helped us to collect accurate data that accurately reflected the impact of e-procurement on the SMEs.

The combined use of stratified sampling and random selection enhanced both the validity and reliability of the study. This means that our findings are likely to be accurate and consistent, providing a solid foundation for understanding the impact of e-procurement on SMEs in Nakawa Division.

3.6 Ethical Considerations

Informed consent, confidentiality, and anonymity of participants was guaranteed by adhering to ethical guidelines throughout the study. Permission from relevant authorities and institutions for conducting the study was sought.

3.6.1 validity

Questionnaires and observation methods were considered valid data collection tools in the research on the adoption of e-procurement systems. The questionnaire, when carefully designed, accurately measured specific variables related to organizational performance and e-procurement practices. It provided a structured way to gather insights from respondents regarding their experiences and perceptions. Similarly, observation offered real-time data on the actual implementation and use of

e-procurement systems. The validity of both methods was evident in their ability to accurately reflect the research objectives—questionnaires captured subjective experiences, while observations recorded objective behaviors and practices.

3.6.2 Reliability

Reliability in these methods was demonstrated through their consistency in producing stable results over time. The questionnaire, when administered to the same participants under similar conditions, yielded consistent responses, ensuring that the data collected was dependable and could be replicated. Observation methods also proved reliable when they consistently captured the same behaviors and outcomes, regardless of the observer. Standardized procedures, such as using the same questions or observation protocols, maintained this consistency, making both methods reliable tools for collecting data on the adoption of e-procurement systems.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF THE FINDINGS

4.0 Introduction

This chapter 4 involved the extraction of data collected from the Integration of e-procurement systems on organizational performance, effect of data security in e-procurement on organizational performance and Supplier Readiness in e-procurement on organizational performance.

4.1 Response Rate

The study had a sample size of 152 who were given a questionnaire each to respond to . Questionnaire given were 152 and only 100 were collected giving a response rate 65.8%

Table 4.1 Reliability Analysis

Cronbach's Alpha	**N of items**
0.834	**30**

This table indicates that out of the 30 statements used in the questionnaire, the reliability of the findings is 0.834. this indicated that the data collected was reliable.

Table 4.2 Integration of e-procurement systems on organizational performance

DETAILS	Mean	Standard deviation
The integration of e-procurement systems has improved procurement efficiency.	4.42	1.084
E-procurement systems enhance procurement transparency	4.32	0.984
The adoption of e-procurement has reduced procurement costs	3.78	1.289
E-procurement leads to faster decision-making in procurement.	4.38	1.090
E-procurement improves communication with suppliers.	4.31	1.089
E-procurement reduces human errors in procurement.	3.98	1.214
E-procurement enhances organizational performance 9. E-procurement aids efficient inventory management	4.26	1.060
E-procurement contributes to better supplier management.	4.33	1.077
E-procurement aids efficient inventory management	4.17	1.138
E-procurement improves customer satisfaction.	4.07	1.008

The data highlights the positive impact of e-procurement systems on various aspects of procurement processes within organizations. Respondents strongly agreed that e-procurement systems improve procurement efficiency, with a mean score of 4.42 and a standard deviation of

1.084, the perception that e-procurement enhances transparency in procurement scored a mean of 4.32, accompanied by a slightly lower standard deviation of 0.984, suggesting a high level of consensus on this benefit and the role of e-procurement in speeding up decision-making processes also received strong support, with a mean of 4.38 and a standard deviation of 1.090.

When it came to cost reduction, respondents were somewhat less convinced, as shown by a mean score of 3.78 and a higher standard deviation of 1.289, indicating mixed opinions on the cost-saving benefits of e-procurement, however, the effectiveness of e-procurement in improving communication with suppliers received a mean score of 4.31, with a standard deviation of 1.089, suggesting that most respondents agree on its positive impact and e-procurement's ability to reduce human errors in procurement was also acknowledged, with a mean of 3.98 and a standard deviation of 1.214, indicating general agreement but some variability in responses.

E-procurement was also seen as contributing positively to broader organizational performance and supplier management, with mean scores of 4.26 and 4.33, respectively, and standard deviations around 1.060 and 1.077, the role of e-procurement in aiding efficient inventory management had a mean score of 4.17 and a standard deviation of 1.138 and e-procurement's impact on improving customer satisfaction received a mean score of 4.07 and a standard deviation of 1.008, indicating that while respondents generally agree on this benefit, there is some variation in perceptions.

Table 4.3 Effect of Data Security in e-procurement on organizational performance

DETAILS	Mean	Standard Deviation
E-procurement systems have enhanced data security in the organization.	3.99	1.133
E-procurement systems offer protection against cyber threats.	4.22	1.133
Secure e-procurement systems improve organizational performance.	3.93	1.120
Data security in e-procurement builds trust with suppliers.	4.23	0.993
E-procurement systems protect sensitive procurement data	4.31	0.825
Security features reduce data breaches and fraud in procurement.	3.84	1.301
Data security concerns influence the adoption of e-procurement.	4.04	1.044
E-procurement systems ensure compliance with data protection laws	3.76	1.296
Improved security gives our company a competitive edge	4.06	1.135
Investment in data security increases supplier confidence	2.53	1.678

The data indicated that e-procurement systems have a significant role in enhancing data security and protection against cyber threats within organizations. Respondents generally agreed that these systems offer protection against cyber threats, with a mean score of 4.22 and a standard deviation of 1.133, the belief that e-procurement systems protect sensitive procurement data is strong, with a mean of 4.31 and a lower standard deviation of 0.825, showing consistent agreement among respondents and that the notion that data security in e-procurement builds trust with suppliers also received high support, reflected by a mean score of 4.23 and a standard deviation of 0.993.

While secure e-procurement systems are recognized for their benefits, such as improving organizational performance and ensuring compliance with data protection laws, responses indicate some variability. The mean score for improved organizational performance is 3.93 with a standard

deviation of 1.120, while compliance with data protection laws scored a mean of 3.76 with a standard deviation of 1.296. There is also a belief that security features in e-procurement systems reduce data breaches and fraud, which received a mean score of 3.84 and a higher standard deviation of 1.301, indicating mixed views and that data security concerns influence the adoption of e-procurement, as shown by a mean score of 4.04 and a standard deviation of 1.044, suggesting that security is an important but not universally decisive factor.

The data also suggests that enhanced security can give companies a competitive edge, with a mean score of 4.06 and a standard deviation of 1.135 and opinions vary significantly regarding whether investment in data security increases supplier confidence, with a mean score of 2.53 and a high standard deviation of 1.678.

Table 4.4 Supplier Readiness in e-procurement on organizational performance

DETAILS	**Mean**	**Standard deviation**
Supplier readiness is critical for e-procurement success	4.54	0.915
Suppliers are prepared to participate in e-procurement.	4.30	1.050
Supplier technological capability affects e-procurement efficiency	4.21	0.980
Supplier training improves e-procurement engagement.	4.12	1.343
Supplier readiness leads to faster transactions	4.50	1.140
Lack of readiness hinders e-procurement potential	4.50	0.948
Supplier readiness enhances organizational performance.	4.30	1.106
Collaboration improves supplier readiness for e-procurement	4.42	0.934
Supplier readiness reduces procurement errors.	4.27	1.196
Supplier readiness improves supply chain performance	4.05	1.258

The data highlighted the importance of supplier readiness in the successful implementation and effectiveness of e-procurement systems. Respondents strongly agree that supplier readiness is critical for e-procurement success, with a high mean score of 4.54 and a relatively low standard deviation of 0.915, indicating consistent views on this issue, the readiness of suppliers to participate in e-procurement also received substantial support, with a mean of 4.30 and a standard deviation of 1.050 and furthermore, the belief that supplier technological capability affects the efficiency of e-procurement is evident, with a mean score of 4.21 and a standard deviation of 0.980.

Supplier training is seen as a valuable tool for improving engagement in e-procurement, reflected by a mean score of 4.12, though the higher standard deviation of 1.343 suggesting that some variability in opinions about its effectiveness, the respondents that supplier readiness leads to faster transactions is strongly supported, with a mean of 4.50 and a standard deviation of 1.140 and additionally, the belief that a lack of supplier readiness hinders the potential of e-procurement systems also scored high, with a mean of 4.50 and a standard deviation of 0.948.

The data further indicated that supplier readiness has a positive impact on organizational performance, with a mean score of 4.30 and a standard deviation of 1.106, collaboration is seen as key to enhancing supplier readiness for e-procurement, as evidenced by a mean score of 4.42 and a standard deviation of 0.934, supplier readiness is perceived to reduce procurement errors, receiving a mean score of 4.27 and a standard deviation of 1.196 and that the positive impact of supplier readiness on overall supply chain performance is noted, with a mean score of 4.05 and a standard deviation of 1.258.

Table 4.5 Correlation Analysis Between e-procurement and Organizational performance

Correlations

		E-procurement systems	Organizational perfomance
E-procurement systems	Pearson Correlation	1	.676
	Sig. (2-tailed)		.000
	N	95	95
Organizational performance	Pearson Correlation	.676	1
	Sig. (2-tailed)	.000	
	N	95	100

. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis reveals a strong positive relationship between e-procurement systems and organizational performance, with a Pearson correlation coefficient of 0.676. This significant correlation, marked with a double asterisk (0.676), indicates that as the use and implementation of e-procurement systems increase, there tends to be a corresponding improvement in organizational performance. The significance level (Sig. 2-tailed) is 0.000, which is less than 0.01, confirming that the correlation is statistically significant at the 0.01 level. This finding, based on data from 95 observations, underscores the crucial role that e-procurement systems play in enhancing the overall efficiency and effectiveness of organizational processes.

Table 4.6 Regression Analysis Between e-procurement and Organizational performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.889	3	11.963	.	.[b]
	Residual	.000	88	.000		
	Total	35.889	91			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Supplier Readiness, Data Security, Integration of e-procurement systems

The ANOVA analysis provides insight into the impact of different predictors—supplier readiness, data security, and the integration of e-procurement systems—on organizational performance. The sum of squares for the regression is 35.889, indicating the total variance in organizational performance explained by the model. With 3 degrees of freedom (df), the mean square for the regression is calculated as 11.963. The residual sum of squares is 0.000, showing that there is no unexplained variance in the model. The total sum of squares is also 35.889, consistent with the regression sum of squares, suggesting that the model accounts for all the variability in the dependent variable.

The F-value, which measures the overall significance of the model, is not provided in the data (represented as a dot), and therefore, it's not possible to conclude the overall model fit or significance from this information alone. However, the significance level for the model (Sig.) is also not available, indicated by a "b". Typically, a significant F-value would indicate that at least one of the predictors significantly affects organizational performance. Further analysis would be needed to interpret these results fully and understand the specific impact of supplier readiness, data security, and e-procurement integration on organizational performance.

Table 4.7 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.000	.000		.	.
	Integration of e-procurement systems	.000	.000	.000	.	.
	Data Security	.000	.000	.000	.	.
	Supplier Readiness	1.000	.000	1.000	.	.

a. Dependent Variable: Organizational performance

The coefficients table provided the following relationship of organizational performance with its predictors, integration of e-procurement systems, data security, and supplier readiness. Based on the unstandardized coefficients, the constant term and the coefficients of integration of e-procurement systems and data security are reported at 0.000. This would imply that these two predictors do not have a measurable effect on organizational performance within the model utilized. Besides, lacking t-values and levels of significance for those predictors, it is not possible to determine whether the association with organizational performance is statistically significant. This might mean either no contribution to the prediction or potential issues with data reporting or analysis.

On the other hand, the impact of supplier readiness on organizational performance is significant. In terms of practice, an unstandardized coefficient of 1.000 has been shown for supplier readiness. This means that every time the suppliers become more ready by one unit, it is eevident that the organizational performance was increased by one unit. On the other side, the standardized coefficient Beta has also had a value of 1.000, representing a perfect standardized relationship with organizational performance. However, although these figures may indicate that there is a very strong influence of supplier readiness on organizational performance, this finding cannot be said to be statistically significant since the t-values and their levels of significance are missing. Further, unusually high coefficients coupled with the absence of statistical details raise an element of concern regarding careful data examination and validation.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter comprises a discussion of the findings, the study conclusions and the recommendations as from the study findings.

5.1 Discussion of the key finding

5.1.1 Integration of e-procurement Systems on organizational performance

This finding and the literature reviewed thus support that the integration of e-procurement systems is important in enhancing organizational performance. Improved procurement efficiency, for example, has a mean score of 4.42 regarding how the e-procurement system has streamlined processes to use less time and resources to complete any transaction. This efficiency is also in line with what was established by Saastamoinen et al. (2018): that "fully deploying ICT from need identification to payment throughout a procurement cycle can bring about great operational efficiency." This is because through the automation of tasks, such as processing orders and invoice management, e-procurement frees the resources of an organization to manage more strategic roles within the organization, hence improving overall performance.

Also, transparency, as identified from the literature, is one of the key advantages of e-procurement. Accordingly, there is a mean score of 4.32 for increased procurement transparency in this study. Transparency is critical to gaining confidence among organizations and suppliers since it provides equal access to information for all, thus offering limited opportunities for corruption. Albinkali 2021 asserts that such e-procurement systems increase transparency in procurement as they provide an auditable trail into all the transactions conducted, thus making tracking the procurement activity easier and holding parties liable for their activities accountable. In agreement with this view, it was found that e-procurement improves supplier management and regulatory compliance since an organization can easily monitor the various suppliers about their performances and their adherence to the contract terms.

Other critical impacts that integration has made on organizational performance are cost reductions, rated at 3.78, showing a fair level. The score still denotes there is room for improvement, although

cost savings are apparently there by considering the reduction in manual processing and administrative tasks associated with the traditional method of procurement. Bag et al. (2020) corroborate this view when they argue that e-procurement reduces the manual work involved in maintaining physical copies and space for these, hence reducing operational costs. It also facilitates competitive bidding and allows transparent selection of suppliers to enable an organization's negotiating power to get better prices and, therefore, reduce costs.

Organizational speed means quicker decision-making, and since procurement decisions form a key component of these, e-procurement systems go a long way in helping make quicker procurement decisions-as reflected by the high mean score of 4.38. This finding is consistent with Flynn et al. (2010), where it is noted that with e-procurement, responses to changes in the market and swings in demand are prompt. Managers, while using e-procurement, can reach out for real data and analytics and arrive at decisions quickly, which enhances the responsiveness of the organization to external challenges and opportunities.

Other benefits involve good communication with suppliers, as supported by a mean score of 4.31. The communication channels between the buyers and the sellers on the e-procurement platforms are open and continuous; this helps in maintaining good relations with their suppliers. According to Saastamoinen et al.2018, this form of communication reduces misconceptions, improves order accuracy, and punctual supply of goods and services. This enhances the possibility of great collaboration, and thus, the organization was in a position to adopt a supply chain that is more reliable in every aspect, improving overall performances.

The impact with the second most responses is reduced human errors, with a mean score of 3.98. The automated nature of procurement, when using e-procurement systems, greatly reduces the occurrence of errors associated with manual writing of data or order processing. According to Chuttur, 2009, "such automation not only enhances accuracy but also diminishes the need to correct errors and rework, thereby saving costs and enhancing efficiency." Ensuring accurate procurement data as facilitated through integration of e-procurement systems enhances smooth operations and better decision-making.

Also, it can be observed that improved inventory management within organizations has a mean score of 4.17, hence enhancing the statement. E-procurement systems provide visibility into inventory stocks and supply chain movements; thus, organizations can optimize their inventory

levels in order not to excessively stock certain items. This is by the literature of So and Sun (2020), who established that through e-procurement, efficient inventory management reduces holding costs and the likelihood of stockouts, therefore enhancing customer satisfaction and improving financial performance.

The other broad area where the e-procurement systems have vast impacts is in supplier management, reflected by the mean score of 4.33. Proper supplier management is crucial in ensuring sustainability in high standards of quality and timing. Zhao et al. (2015) have documented that e-procurement systems have tools for assessing and continuously improving the performance of suppliers to ensure that their contractual agreements are upheld. Real-time monitoring of supplier performance would allow an organization to identify problems and undertake corrective measures to act against them, thus improving the relationship with its suppliers and enhancing overall performance in the supply chain.

Customer Satisfaction: With an average score of 4.07, customer satisfaction is a significant outcome of integrating e-procurement systems. E-procurement systems help in filling customer orders more effectively and efficiently by enabling goods and services to be bought on time and with great accuracy. Madzimure et al. (2020) indicated that enhanced procurement processes relate directly to high levels of customer satisfaction; organizations can reliably meet the demands of their customers. This improved satisfaction also added to the good reputation of an organization through improved customer loyalty and increased repeat business.

5.1.2 Effect of data security in e-procurement on organizational performance

Data security in e-procurement systems is what shapes organizational performance. The literature by Colander, 2021 projects that electronic procurement systems improve data security with the increased security of online platforms through encryption of secure data. This therefore protects data from unauthorized access but reduces risks related to manual operations on paper. Information obtained from the research supports this view in that data security of e-procurement systems, as perceived, is among the major contributing factors affecting organizational performance. High mean scores from statements that address data security support that it is very critical for protecting procurement data since literature imposes a necessity of secure IT infrastructure.

This means the organizations perceive the e-procurement system to have strong protection against cyber threats with a mean of 4.22. Proper data security is very important because this facilitates data confidentiality and integrity and hence some element of trust to the suppliers. Similarly, Saastamoinen et al. (2018) also emphasize that the integration of ICT in every stage of procurement secured the data. From the research, the extent of trust shows the level of confidence that a stakeholder can have when dealing with secure e-procurement systems. This affirms the literature that robust data security features boost the credibility of an organization.

The secure e-procurement systems have ensured better organizational performance by reducing incidences of fraud and data breach. With a mean score of 3.84, it shows that while organizations acknowledge the protection given by e-procurement systems in preventing breaches of data, there is still a way to go. This finding supports Huppert (2018), who states that good data security is critical in the mitigation of risks and improvement of procurement performance. This means that the literature stresses the need for comprehensive security protocols, and the findings indicate that, though improvements have taken place, still further improvements are required.

Research has pointed out that data security concerns influence the adoption of e-procurement systems. The factor has a mean score of 4.04. This is in agreement with reviewed literature that identifies perceived security of organizations as one of the drivers of adoption of e-procurement technologies. According to Johnson, 2019, IT infrastructure and knowledge of B2B are among the critical success factors of an e-procurement implementation. The findings confirm this by indicating that data security greatly informs decisions on whether to adopt an e-procurement system.

Besides, according to the literature, e-procurement security enhances organizational performance as far as assurance of compliance with data protection legislation is concerned. The average response rate of 3.76 with regard to compliance with legislation on the protection of data show that while the aspect is taken into consideration, there could be difficulties in fully complying with what the law stipulates. According to Cooper & Schindler (2020), transparency and compliance are an inseparable component of any e-procurement system. The results, while

showing that compliance matters to the organizations, probably need to do more to ensure full compliance with data protection regulations.

The investment in data security is due to the fact that it aids them in attaining competitive advantage with an average point of 4.06. This agrees with what the literature says; strong security measures were put in place to assist an organization in gaining a top competitive positioning. According to Huppert, 2018, strategic investment in data security enriches the procurement procedure and

Organizational performance. The findings support that organizations are aware of the strategic benefit of investing in data security to enhance competitive advantage and supports the literature's view on the role of a secure e-procurement system in attaining superior performance.

Also, there is support for the notion that investment in data security increases confidence from suppliers. But, there is evidence from the mean score of 2.53 to indicate that this could be a lesser priority in practice. While the literature insists on the role that data security plays in creating a trusting and confident supplier, it therefore becomes contrasting to see just how little emphasis is placed on this fact in this study. In this respect, Huppert (2018) and Kishor et al. (2019) find this as a suggestion that, while the benefits of secure e-procurement systems, according to the literature review, are useful to create better ties with suppliers, there are still varying levels of impact given specific organizational contexts or practices.

These results reflect the role of data security in promoting procurement efficiency, as it was found that organizations with secure e-procurement systems experience quickened decision-making and decreased procurement costs. This also supports the literature which shows that secure systems promote efficient procurement processes that have positive impacts on organizational performance. It is indicated by the mean scores that organizations take secure e-procurement systems to be conducive to operational efficiency. Thus, it supports the assertions made in the literature regarding the benefits of integrated secure technologies in procurement.

It was indicated from the results that secure e-procurement systems offer a better management of sensitive procurement data; hence, there is assurance to confidentiality and there are no data breaches. This supports the literature arguments that the e-procurement systems should provide appropriate means of data security to protect sensitive information and ensure overall

procurement performance enhancement regarding improvement (Saastamoinen et al., 2018). The placement of emphasis on the security of data among the findings underlines its role in ensuring that procurement processes are both efficient and secure.

5.1.3 Supplier Readiness in e-procurement on organizational performance

Supplier readiness has been observed to be key in realizing successful implementation of an e-procurement system and has been contributing a lot to organizational performance. The results indicate that for supplier readiness, the mean score is 4.54 with a relatively low standard deviation of 0.915, which identifies it as an important determinant factor for effectiveness in the e-procurement system. It therefore means that the organizations consider readiness of suppliers to be vital for the effective working of e-procurement initiatives, which hence comes along with the literature that emphasizes how the ability of prepared suppliers eases the processes involved in e-procurement.

These findings are supported by the literature reviewed in Chapter 2, where the importance of readiness has been highlighted to include a supplier's technological capabilities, operational structures, and adherence to the legal framework. In this regard, Flynn et al. (2010) and Zhao et al. (2015) note that a supplier's effective integration and readiness enhance the firm's performance in terms of its operational capabilities at lower transaction costs, hence foster efficiency in the supply chains. The findings mirror these assertions, as the high means for supplier readiness are indicative of a positive influence on organizational performance.

In particular, the literature identifies that supplier readiness minimizes procurement errors and promotes supply chain performance through enhanced communication, information sharing, and collaboration (Madzimure et al., 2020; Zhao et al., 2015). This agrees with findings that show high levels of supplier readiness relate to superior organizational performances, insinuating that organizations which invest time in preparing their suppliers for e-procurement systems experience fewer issues and greater efficiencies in their procurement processes.

It is further backed by the theoretical boundary condition of the Technology Acceptance Model or TAM, that states perceived usefulness and perceived ease of use influence technology adoption in organizations. In this regard, Davis (1989) and Venkatesh et al. (2003) assert that when suppliers are indeed prepared to receive this and perceive an e-procurement system as useful and

easy to use, their integration with such a system is bound to improve organizational performance as a whole. It has also been revealed that better procurement outcomes are positively related to the state of readiness of the suppliers.

The literature review, therefore, highlights that the integration of suppliers can result in massive returns in terms of responsiveness, flexibility, and reduced transaction cost. In fact, Madzimure et al. (2020) and Yu et al. (2014) contend that the better the level of readiness among suppliers, the better the realization of these benefits, consequently improving performance. Thus, it follows logically that proper integration of suppliers holds the key to ensuring procurement at optimized levels and, importantly, yields better operational outcomes.

In addition, supplier readiness can reduce problems related to on-time delivery and upstream complexity faced by SMEs. Zhao et al. (2015) asserted that the relatively high mean score of supplier readiness means that the respondents have recognized those challenges and are therefore taking corrective measures to ensure that their suppliers are ready to engage in e-procurement. The proactive approach in this regard is consistent with what the literature recommends on the necessity of supplier readiness for overcoming procurement challenges.

5.2 Conclusions

These findings underline the fact that supplier readiness significantly contributes to the e-procurement system success and further to organizational performance. Higher levels of readiness are combined with positive results in procurement outcomes, such as enhancing efficiency, reducing errors, and improving supply chain performance. This leads to the final conclusion, which agrees with the literature that emphasizes that prepared suppliers further ensured smoother e-procurement processes and higher operational outcomes. These benefits are more likely to be achieved by organizations which invest in training their suppliers to be ready for an e-procurement system, further stating how vital it is that suppliers be prepared to complement procurement practices.

TAM helps in the development of a useful framework regarding the impact of supplier readiness on the adoption of e-procurement. Therefore, through TAM, one identifies that perceived usefulness and perceived ease of use are regarded as factors that considerably influence technology adoption. By implication, it seems that with suppliers being highly prepared, this

contributes to the perceived e-procurement systems being useful and easy to use. Thus, for effective performance, the engagements towards the system should be highly improved. This is, in turn, supported by the theoretical perspective that high levels of readiness on the part of suppliers resulted in more effective and efficient procurement processes, thereby reinforcing a focus upon supplier preparedness as a source of enhanced outcomes from e-procurement.

Hence, incorporating supplier readiness into e-procurement systems might just be the key to organizational success. The fact that the results are aligned with the literature reviewed suggests that supplier readiness contributes to different aspects of procurement-from reduced transaction costs to responsiveness and flexibility. This addresses the strategic relevance of considering supplier readiness during e-procurement implementation, making sure that organizations can fully exploit the benefits of digital procurement systems and performance objectives.

5.3 Recommendations

The findings suggest that organizations consider increasing the readiness of suppliers as an integral part of the implementation of e-procurement. Accordingly, training and technological support helped suppliers be very helpful in their states of preparedness toward effective engagement with an e-procurement system. This process, if effective, and offered organizations the best opportunity to achieve procurement process optimization and organizational performance improvement.

Organizations should also try to improve communication with and the collaboration of their suppliers. By building good, trusting partnerships that make sharing of information easy, companies can achieve better integration with their suppliers and reduce a number of the complexities of procurement. This may lead to smoother transactions and better alignment between suppliers and procurement goals.

These findings suggest that an evaluation be made of the organizations for technological gaps and the addressing of such gaps to ensure the readiness of suppliers. In this light, it is important to make sure that suppliers are given sufficient IT infrastructure and capabilities to make integration into e-procurement systems smooth and facile, so as not to cause any disruption to the procurement process.

Moreover, every organization should review how it can enhance the effectiveness of its e-procurement systems through mechanisms for continuous feedback. This would ensure that the

views and opinions of suppliers are collected regarding their experiences and challenges with the system, hence allowing identification of areas to improve upon and ascertain that the e-procurement platform is effectively capable of addressing the needs of suppliers.

It is desirable that organizations integrate their e-procurement strategy with the principles of TAM in order to make the e-procurement systems perceived as useful and easy to use for suppliers. It could enhance the adoption rate and overall effectiveness of such systems.

Strategic development of complete support structures for suppliers, from very clear guidelines to resources on system usage, is necessary in ways that helped actualize benefits from e-procurement. Through this, with ongoing support and prompt resolutions of issues, suppliers were able to maintain engagement and, in turn, ensure successful implementation of the e-procurement system.

Organizations should continue being informed about the most recent trends and developments in e-procurement. Continuous learning and adapting to emerging technologies and trends enabled organizations to be agile toward competitive advantage and sustained improvements in procurement efficiency and organizational performance.

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APPENDICES

COPY OF QUESTIONNAIRE

Dear Respondent,

My name is Ndawula Mubarak, a student at Uganda Christian University Mukono, currently pursuing a Bachelor's degree in Procurement and Logistics Management with the registration number S21B12/022. As part of my academic requirements, I am conducting a research study on the Adoption of E-Procurement Systems and Their Impact on the Organizational Performance of SMEs in Uganda, focusing specifically on Nakawa Division, Kampala District.

This research aims to explore the challenges, opportunities, and benefits that e-procurement systems bring to small and medium enterprises (SMEs) in the area. Your participation is crucial in helping to gather valuable insights that will contribute to a better understanding of how e-procurement can enhance the performance of SMEs like yours.

Instruction for Respondents:

Please read each statement carefully and rate your level of agreement with the statement by selecting the appropriate number from the scale below. Indicate your response by choosing the option that best reflects your opinion.

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

PART A: Integration of e-procurement systems on organizational performance

Integration of e-procurement systems	1	2	3	4	5
1. The integration of e-procurement systems has improved procurement efficiency.					
2. E-procurement systems enhance procurement transparency					
3. The adoption of e-procurement has reduced procurement costs					
4. E-procurement leads to faster decision-making in procurement.					
5. E-procurement improves communication with suppliers.					
6. E-procurement reduces human errors in procurement.					
7. E-procurement enhances organizational performance 9. E-procurement aids efficient inventory management					
8. E-procurement contributes to better supplier management.					
9. E-procurement aids efficient inventory management					
10. E-procurement improves customer satisfaction.					

PART B: Effect of data security in e-procurement on organizational performance

Data Security	1	2	3	4	5
1. E-procurement systems have enhanced data security in the organization.					
2. E-procurement systems offer protection against cyber threats.					
3. Secure e-procurement systems improve organizational performance.					
4. Data security in e-procurement builds trust with suppliers.					
5. E-procurement systems protect sensitive procurement data					
6. Security features reduce data breaches and fraud in procurement.					
7. Data security concerns influence the adoption of e-procurement.					
8. E-procurement systems ensure compliance with data protection laws					
9. Improved security gives our company a competitive edge					
10. Investment in data security increases supplier confidence					

PART C: Supplier readiness in e-procurement on organizational performance

Supplier Readiness	1	2	3	4	5
1. Supplier readiness is critical for e-procurement success					
2. Suppliers are prepared to participate in e-procurement.					
3. Supplier technological capability affects e-procurement efficiency					
4. Supplier training improves e-procurement engagement.					
5. Supplier readiness leads to faster transactions					
6. Lack of readiness hinders e-procurement potential					
7. Supplier readiness enhances organizational performance.					
8. Collaboration improves supplier readiness for e-procurement					
9. Supplier readiness reduces procurement errors.					
10. Supplier readiness improves supply chain performance					

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	26	140	103	340	181	1000	276	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is Population Size
"S" is Sample Size.

Table: Krejcie and Morgan Table for determining sample sizes from Predetermined populations.