The impact of e-procurement on supply chain performance of non-government organisations: A case study the international rescue committee

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S20B12/256

A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF A BACHELOR'S DEGREE IN PROCUREMENT AND LOGISTICS MANAGEMENT OF UGANDA CHRISTIAN UNIVERSITY

September, 2023

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APPROVAL

This paper has been submitted for examination with my approval.

Signature…… Date…10/09/2023……

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DEDICATION

I dedicate this research report to my beloved parents Mr. and Mrs. Jada who have tirelessly supported me financially and ethically for the entire time I pursed this course and their endless efforts to see me educated. May the heavenly Father bless them for their kindness and affection to me?

ACKNOWLEDGEMENT

First and foremost, I thank the almighty GOD for His enabling grace, mercy and abundant provisions that have brought me this far in my education. I also thank my mother Mrs. Rose Yambi Jada and father Mr. Jada Khamis who have tirelessly and endlessly provided for me up to this level.

In a very special way want to thank my supervisor Mrs. Tumuhamnye Comfort, who has guided me tirelessly and helped me complete this research report, may the good Lord Bless you. I wish to convey my sincere thanks to all those who helped me directly or indirectly towards the successful completion of this research report. It is my conviction that without your assistance, the task would have been impossible for me. I am also grateful to the International Rescue Committee staff who helped me attain all the information and data used in this research report. Once again I thank the almighty God who has made everything possible for me.

ABSTRACT

This dissertation aimed to explore the impact of e-procurement on supply chain performance within the International Rescue Committee (IRC), a humanitarian organization that operates in different parts of the world. The study sought to achieve three specific objectives: to examine the relationship between e-procurement and supply chain performance, to investigate the roles of electronic order processing on supply chain performance, and to identify the challenges encountered in the implementation of e-procurement at IRC. To achieve these objectives, a mixed-methods research approach was adopted. Data was collected through a pre-tested close ended questionnaire and interviews with procurement staff at IRC and other departments.

The study revealed a strong positive correlation between the adoption of e-procurement processes and improved supply chain performance at IRC, with a significant relationship between the two. The results indicated that e-procurement contributes significantly to reducing time taken to procure goods and services, leading to faster delivery times and better coordination between procurement departments and other supply chain activities.

In examining the impact of electronic order processing on supply chain performance at the International Rescue Committee, the research findings reveal that electronic order processing has played a crucial role in enhancing the supply chain performance of the organization. One of the significant benefits is the reduction of transactional costs as it eliminates the need for physical paperwork and its ability to reduce the lead time for procurement.

However, the study also identified a number of challenges encountered during the implementation of e-procurement at International Rescue Committee. This included resistance to change from the staff, data security breaches, high cost of implementation and integration of the new system with existing systems and processes.

The study recommends that the International Rescue Committee look into strengthening the training of staff, invest in more advanced e-procurement systems that provide real-time visibility of the procurement process, achieve integration of e-procurement throughout the supply chain. The study also provides practical recommendations for organizations that are considering implementing e-procurement to enhance their supply chain performance.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter contains the background of the study, statement of problem, objectives of study, research questions, and scope of the study and significance of the study.

1.2 Background of the study

The establishment and application of procurement functions in various organizations has been considered a significant aspect on determining organizational performance. Essentially, different firms across the globe are fully engaged in the procurement process for the purposes of operations in their organization. Electronic procurement has therefore emerged as key enabler in supply chain performance which consists of indent management, e-invoicing, e-payment, e-order processing, e-requests for quotations and e-informing and tendering (Vaidya, Sajeev & Callender, 2006). Suppliers in different categories have embraced electronic procurement in bettering their position in the market through automation of supply chain processes (Handfield, Monczka, Grunipero & Patterson, 2011). Rao & Ragunathan (2007) established that companies and other entities are under pressure to embrace e-procurement and the philosophy of supply chain to improve their competitive advantage. However different organizations have different supply chain management techniques.

E-procurement has been defined directly by various scholars for example, according to Lysons (2006) the chartered institute of purchasing and supplies (CIPS) defined e-procurement as the combined use of information and communication technology through electronic means to enhance external and internal purchasing and supply management processes. Wu, Ross and Zsidisin, (2007) defined e-procurement as the use of information technologies to facilitate business purchase transactions for material and services. It utilized electronic commerce to identify potential sources of supply to purchase goods and services, to transfer payments and to interact with suppliers. (Min and Galle, 2003)

It is commonly accepted that information infrastructures such as e-procurement systems have become increasingly connected and embedded with other infrastructures to initiate the growth of enterprises (Vast and Walsham, 2009). In line with this notion, the usage of information technology in e-procurement systems is considered to be an innovation strategy action. E-procurement enables purchasers to buy goods and services through the use of internet facilities in a variety of forms. For instance, through online tendering (e-tendering), tenders for contracts

are made online. This has enhanced participation among suppliers. Tools and solutions are used to deliver a range of options that will facilitate improved purchasing and supply management.

The characteristics of an e-procurement system are buyer and supplier with presence of a medium which is a web-based application software. Benefits that accrue to an organization that adopts e-procurement are transparency, process efficiency, cost reduction, paperless environment, new supplier discovery and streamlining procurement process.

Globally, e-procurement has gained popularity especially with the advent of technology following the development of Electronic Data Interchange (EDI) in the 1980s. In the United States of America for instance, rapid development of e-procurement was reported in early 2000 just before the recession. By the end of the same year, it was reported that all state functions were maintaining web presence in at least some stage of their procurement processes with some participating in online bidding (Reddick,2004).

Organizations that use e-procurement technologies save 42% in purchasing transaction costs due to the simplification in the purchase process and the reduction in purchasing cycle time, which in turn, increases flexibility and provides more up-to-date information at the time of placing a purchase order. Thus, e-procurement tends to leverage the bargaining power of companies willing to establish contracts with their preferred suppliers and as a result, the overall maverick buying is lower (Baily, 2008)

Supply chain became popular in the early 1980s and interest in supply chain performance on the part of academicians and practioners has grown over the last two decades. Lambert and Cooper, (2000) defined supply chain performance as the integration of key business processes from the end user all through to the original suppliers that provide products, services and information that adds value for customers and other stakeholders. It involved the integration of business information flows and people.

Presuti, (2003) asserts that factors which impact on supply chain performance include the decision in the area of facilities (location, number and capacity), inventory (economies of scale, ability to meet demand) and transportation (mode, networks) and has become a crucial and vital factor for ensuring survival of firms Hertley, Lane and Duplaga, (2006). It has contributed significantly to more effective management of organizational change by minimizing the adverse effects of organizational politics. Supply chain performance aims at streamlining the organization's supply process while simultaneously strengthening the strategic position of the organization Frohlich and West brook. (2002)

The International Rescue Committee has put in place all the structures required for a successful e-procurement system such as the use of Budget Versus Actual (bva) which has initially been replaced with Integra a supply chain software system that integrates all activities with the supply chain and this is due to innovations and advancements in technology, but the performance of supply chain has not been without problems. Reasons for this include attitude of staff, limited IT equipment's and limited knowledge and expertise of the staff about mechanism of e-procurement.

1.3 Statement of the Problem

The accelerating pace of change in technology demands that organizations be more flexible and adaptive in the business world. Evolutions in information technology have become paramount to the business world and thus various strategies such as e-commerce, e-marketing have been adopted by organizations in a bid to improve their competitiveness and efficiency in the supply chain both internally and externally. Procurement officers at the International Rescue Committee have adopted new strategies like e-auctioning, e-tendering, e-invoicing and e-order processing in an attempt to achieve sound supply chain performances (Vaidya, Sajeev & Callender, 2006). However, the adoption of these new technologies, such as the use of internet to source for suppliers as well as purchasing goods and services by organizations has often proved to be reactive rather than proactive and is not technically compatible with some sectors hence organizations' supply performances have continuously declined. This research therefore sought to find out whether e-procurement is a deliverer of real value in terms of quality goods and services, timely delivery and great savings in the supply chain.

1.4 Purpose of the Study

The purpose of the study was empirically to examine the impact of e-procurement on supply chain performance at the international rescue committee.

1.5 The Specific Objectives

i. To establish the relationship between e-procurement and supply chain performance at the International Rescue Committee.
ii. To examine how electronic order processing impacts supply chain performance at the International Rescue Committee.
iii. To assess the challenges encountered in the implementation of e-procurement at the International Rescue Committee.

1.6 Research Questions

i. What is the relationship between e-procurement and supply chain performance at the International Rescue Committee?
ii. How does electronic order processing impact supply chain performance at the International Rescue Committee?
iii. What are the challenges encountered in the implementation of e-procurement at the International Rescue Committee?

1.7 Scope of the Study

1.7.1 Subject scope

The research was built in the view of literature about e-procurement and supply chain performance taking the case of the International Rescue Committee.

1.7.2 Geographical scope

The study took the case of the International Rescue Committee which is located on Goshen House, Airport Road Juba, and South Sudan.

1.7.3 Time scope

The variable of e-procurement was investigated on how it affected supply chain performance and all discussions were considered from the period 2018 to 2022 and the time of study and research from March-August (2023).

1.8 Significance of the Study

- The research findings may be beneficial to experts, procurement professionals, academicians, policy makers, vendors and investors. Experts in the region of e-procurement may use this review as a point of reference. Given that the subject of procurement has gained significant popularity among professionals and academicians, its demand is incredibly high. Many people will be able to depend on it to promote the general academic and scholarly inputs.
- It will enable them understand the impact of e-procurement on performance of supply chain management in organizations. To future Researchers, the study to add knowledge to e-procurement and performance discipline, and would also help them in carrying out further and related studies.

- To help the researcher obtain a bachelor's degree in procurement and logistics management since having a dissertation is one of the requirements for its achievement.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive review of literature on the relationship between e-procurement and supply chain performance, electronic order processing and supply chain performance, and the challenges encountered in the implementation of e-procurement. The chapter also highlights the relevant theories and models that have been used to support the study. The literature review aims to provide a background to the study, to identify gaps in knowledge, and to provide insight into the research questions.

2.2 Definition of key variables

2.2.1 E-procurement

E-procurement is a technology-driven process that enables organizations to streamline their procurement processes and improve supply chain performance (Li, 2018). With the increasing importance of supply chain management in achieving competitive advantage, e-procurement has become an essential tool for organizations looking to enhance their supply chain performance (Fan et al., 2019). The International Rescue Committee (IRC) is a non-governmental organization that provides humanitarian aid to refugees and displaced persons.

E-procurement is the use of technology to automate the purchasing process and streamline procurement activities. It involves the use of electronic systems, such as websites and software, to manage the entire procurement cycle, from requisition to payment. E-procurement systems are designed to replace traditional paper-based processes, which are often slow, inefficient, and error-prone. This technology-enabled procurement approach enables organizations to enhance their purchasing efficiency, improve supplier management, and reduce costs. By automating the procurement process, e-procurement solutions eliminate the time-consuming and tedious manual tasks associated with procurement, such as filling out purchase orders, managing supplier contracts, and tracking inventory. Additionally, e-procurement solutions often provide real-time reporting and analytics, allowing organizations to monitor procurement performance, track spending, and identify opportunities for cost savings. The adoption of e-procurement is rapidly growing in many industries, including the non-governmental organization (NGO) sector, which pursues various organizational objectives and depends on efficient and effective procurement practices. With e-procurement, NGOs can achieve greater transparency, accountability, and traceability in their procurement processes, thus ensuring that donor funds

are utilized effectively, and beneficiaries receive timely and appropriate assistance. Overall, e-procurement is a powerful technology that has the potential to revolutionize procurement practices in organizations, including NGO's, by improving efficiency, controlling costs, and enhancing transparency.

2.2.2 Supply chain performance

The phase “supply chain performance” means the tangible (cost and quality) and intangible (capacity and resource utilization) outcomes that can be achieved via effective supply chain management. Pattanayak and Punyatoya, 2020; Presutti, 2003.

The evaluation of supply chain management and the evaluation of supply chain operations expenses as a tangible component and the utilization of supply chain capacity as an intangible aspect, are all examples of supply chain performance. Faheem and Siddiqui, 2020; Eng 2004).

Mahzimure et al. (2020); Srinivasanet al. (2011) defined supply chain performance as the performance of several processes inside a company’s supply chain function. Cooperation and shared decision-making among trading partners are critical components of a successful supply chain (George et al. 2011; Madzimure et al. 2020)

Costs, delays, adaptability, diversity and traceability are all factors that companies strive to improve. As they contribute to performance, collaborative practices and information sharing between partners become vital in any supply chain. An effective performance evaluation is crucial to supply chain performance because it lays the groundwork for understanding the system and communicating the impact of systematic efforts to supply chain partners. Madzimure et al.2020; Bhagwat & Sharma 2007). Because supply chain performance is a multidimensional notion, many strategies for defining these limitations have been offered. Madzimure et al, (2020) defined three measures as crucial aspects in measuring an organization’s supply chain performance: resources, output, and adaptability. Madzimure and colleagues (2020) suggested an approach based on three supply chain performance measurement levels, as proposed by Gunasekara and colleagues (2001). (Strategic, tactical and operation). Another supply chain performance model proposed by Madzimure et al. (2020) divides measurement into two phases: quantitative and qualitative. Nonetheless, the supply chain council developed the Supply Chain Operations Reference (SCOR) model, which bases all supply chain activities on planning, sourcing, manufacturing, and delivery and return procedures.

Overall, supply chain effectiveness is seen as a critical aspect in gaining a competitive edge (Hsin Chang et al. 2013; Madzimure et al, 2020). Strategic purchasing is responsible for duties such as supplier management, purchase requisition bundling, and procurement-oriented product creation. Companies can use e-procurement to decentralize operational procurement procedures while centralizing strategic procurement. Through e-procurement platforms, this leads to better supply chain transparency. In terms of strategy, e-procurement will aid in the consolidation of purchasing methods, resulting in bigger discounts and better supplier service. It also minimizes administration times and frees up personnel to do other work by speeding up transfer of crucial information between the buyer and supplier. This enables NGOs to respond quickly to highly competitive new entrants and expand its commercial opportunities.

2.3 Empirical review

This section covers empirical literature on the study objectives:

2.3.1 The relationship between e-procurement and supply chain performance at the International Rescue Committee

Supply chain performance is the result of the effective coordination of various supply chain activities such as procurement, production, inventory management, and distribution (Zhu et al., 2019). E-procurement is one of the key supply chain activities that has the potential to significantly impact supply chain performance (Fan et al., 2019). E-procurement improves supply chain performance by reducing procurement cycle time, increasing procurement accuracy, reducing procurement cost, and enhancing supplier management (Kumar et al., 2018). Supply chain performance is a critical determinant of the success of organizations in today's highly competitive business environment. Effective coordination of the various supply chain activities, including procurement, production, inventory management, and distribution, is essential to achieve efficient supply chain performance (Zhu et al., 2019). Procurement is a key supply chain activity that is critical to the success of any organization, and e-procurement has been identified as a significant factor that can impact supply chain performance positively (Fan et al., 2019).

Several studies have examined the relationship between e-procurement and supply chain performance. For instance, Basso and Larsen (2015) conducted a study to determine the impact of e-procurement on supply chain performance in a Brazilian oil company. The study found that e-procurement led to a significant improvement in supply chain performance by reducing procurement lead time, reducing costs, improving supplier performance, and enhancing

communication and collaboration between suppliers and buyers. On the other hand, of the critical advantages of e-procurement is that it reduces procurement cycle time by automating procurement processes and eliminating paper-based manual processes (Kumar et al., 2018). E-procurement also enhances procurement accuracy by eliminating the possibility of manual data entry errors, and it streamlines supplier management processes by providing real-time access to supplier performance data (Kumar et al., 2018). Furthermore, e-procurement has the potential to significantly reduce procurement costs by optimizing the procurement process, enhancing supplier competition, and reducing the need for manual intervention (Kumar et al., 2018).

Sharma et al. (2018) conducted a study on the impact of e-procurement on supply chain performance in the Indian manufacturing sector. The study found that e-procurement led to significant improvements in supply chain performance by reducing procurement costs, improving supplier performance, reducing procurement lead time, and enhancing communication and collaboration between suppliers and buyers. In addition to reducing procurement cycle time, increasing procurement accuracy, reducing procurement cost, and enhancing supplier management, e-procurement can also facilitate transparency in procurement activities, which can lead to increased trust among supply chain partners (Nguyen et al., 2021). This increased trust can result in better communication and collaboration, which in turn can lead to better supply chain performance (Soltani et al., 2021). Furthermore, e-procurement can also improve inventory management by providing real-time inventory data and enabling more efficient inventory control (Chang et al., 2019).

However, it is worth noting that the relationship between e-procurement and supply chain performance may not always be straightforward. Although several studies have identified the potential benefits of e-procurement, the impact of e-procurement on supply chain performance has not been fully explored. Moreover, the extent to which e-procurement can improve supply chain performance may vary depending on the specific context of the organization. For instance, a study by Rosch and Czinki (2019) found that while e-procurement implementation improved procurement performance, it did not have a significant effect on overall supply chain performance in the German automotive industry. Similarly, a study by Jung and Joo (2019) found that e-procurement implementation had a positive effect on procurement performance, but not on supply chain performance in the South Korean automotive industry. The International Rescue Committee is one such organization that could benefit significantly from the implementation of e-procurement. Therefore, investigating the relationship between e-

procurement and supply chain performance at the International Rescue Committee can provide valuable insights into the potential benefits and challenges associated with e-procurement implementation in humanitarian organizations.

2.3.1 How electronic order processing impacts supply chain performance at the international rescue committee.

Electronic order processing is a critical aspect of e-procurement and can significantly impact supply chain performance. Electronic order processing refers to the electronic transmission of purchase orders, order confirmations, and other related documents between buyers and suppliers (Zhao et al., 2020). This process eliminates the need for manual processing of orders, reducing the chances of errors and delays, thus enhancing supply chain performance (Pereira et al., 2019). Electronic order processing has become an important tool in supply chain management because of its potential to improve the efficiency and effectiveness of order processing activities.

Since electronic order processing is a critical aspect of e-procurement that has the potential to significantly impact supply chain performance. Several studies have investigated the relationship between electronic order processing and supply chain performance. For instance, Lee et al. (2020) found that electronic order processing leads to significant improvements in procurement cycle time, order accuracy, and on-time delivery. This implies that the use of electronic order processing can help streamline procurement processes and improve order accuracy, resulting in a more efficient and effective supply chain. Similarly, Seol et al. (2019) reported that electronic order processing enhances visibility and transparency in the supply chain, leading to better inventory management and lower costs. Electronic order processing provides real-time updates on inventory levels and helps identify inventory discrepancies, which can be quickly addressed. This not only leads to better inventory management but also helps reduce costs associated with inventory holding, spoilage, and obsolescence. In addition, electronic order processing can help reduce lead times by enabling faster processing of orders and improving communication between suppliers and buyers (Kumar et al., 2018). This can help improve on-time delivery, which is crucial in ensuring that products are available when needed. Overall, the literature suggests that electronic order processing has a positive impact on supply chain performance, and its implementation can result in significant benefits for organizations.

Tiwari et al. (2013) conducted a study on the impact of electronic order processing on supply chain performance in the Indian manufacturing sector. The study found that the use of electronic order processing systems led to significant improvements in supply chain performance by reducing order lead time, reducing order error rate, improving delivery performance, and enhancing communication and collaboration between buyers and suppliers. The authors noted that the use of electronic order processing systems enabled buyers and suppliers to exchange information in real-time, resulting in better decision-making and increased visibility throughout the supply chain. This finding is consistent with the results reported by Lee et al. (2020) and Seol et al. (2019), who also found that electronic order processing improves procurement cycle time and on-time delivery. The authors noted that the use of electronic order processing systems enabled suppliers to receive purchase orders in real-time, allowing them to initiate production and delivery processes more quickly and efficiently. This, in turn, reduced order lead time and improved delivery performance. Tiwari et al. (2013) also reported a significant reduction in the order error rate due to the implementation of electronic order processing systems. This finding is consistent with the results of other studies, such as Fan et al. (2019) and Kumar et al. (2018), who reported that e-procurement reduces procurement errors and enhances supplier management. The authors noted that electronic order processing systems reduce the likelihood of errors associated with manual order processing, such as incomplete or incorrect order details.

Moreover, Tiwari et al. (2013) found that electronic order processing enhances communication and collaboration between buyers and suppliers. This finding is consistent with the results of other studies, such as Chen et al. (2018) and Wang et al. (2019), who reported that e-procurement improves communication and collaboration between supply chain partners. The authors noted that electronic order processing systems enable buyers and suppliers to exchange information in real-time, facilitating better decision-making and increased visibility throughout the supply chain. In summary, Tiwari et al. (2013) found that electronic order processing systems have a significant positive impact on supply chain performance by reducing order lead time, reducing the order error rate, improving delivery performance, and enhancing communication and collaboration between buyers and suppliers. These findings are consistent with the results reported by other studies, highlighting the importance of electronic order processing systems in improving supply chain performance.

Similarly, Lee et al. (2020) investigated the impact of electronic order processing on supply chain performance in the food and beverage industry. The study found that electronic order

processing led to significant improvements in procurement cycle time, order accuracy, and on-time delivery. The authors attributed these improvements to the increased visibility and accuracy enabled by electronic order processing, as well as the improved communication and collaboration between buyers and suppliers. The findings from these studies suggest that the adoption of electronic order processing systems can have a positive impact on supply chain performance by improving communication and collaboration between buyers and suppliers, increasing visibility and accuracy, reducing order lead time, and enhancing delivery performance. Furthermore, Seol et al. (2019) reported that electronic order processing enhances visibility and transparency in the supply chain, leading to better inventory management and lower costs. The authors also noted that electronic order processing improves the accuracy and speed of order processing, which leads to better decision-making and reduced order errors. So, these findings meant that they underscore the importance of electronic order processing in improving supply chain performance. The adoption of electronic order processing systems can enable organizations to streamline their supply chain operations, improve communication and collaboration, and ultimately enhance their overall supply chain performance.

Furthermore, in addition to reducing procurement cycle time, improving order accuracy, and enhancing communication and collaboration between buyers and suppliers, electronic order processing can also improve supplier relationship management. According to Choy et al. (2018), electronic order processing enables buyers to communicate more effectively with suppliers, leading to improved collaboration and better supplier performance. By facilitating information exchange and enhancing supply chain visibility, electronic order processing allows buyers and suppliers to make better-informed decisions, coordinate more effectively, and respond more quickly to changes in demand. As a result, electronic order processing can help organizations like the International Rescue Committee to streamline their supply chain operations, reduce costs, and improve overall supply chain performance. However, despite the potential benefits of electronic order processing, there are also challenges associated with its implementation, such as resistance to change, lack of trust, and security concerns. Therefore, it is crucial for organizations to carefully evaluate their readiness for electronic order processing and develop effective strategies for managing the transition.

2.3.3 The challenges encountered in the implementation of e-procurement at the International Rescue Committee.

Despite E-procurement becoming a widely accepted means of managing procurement activities in many organizations like the International Rescue Committee, the implementation of e-

procurement systems can present several challenges one of which is resistance to change. The implementation of e-procurement systems has become increasingly popular in recent years as organizations seek to improve their supply chain performance. However, there are several challenges associated with the implementation of these systems, and one of the most significant is resistance to change. According to Li et al. (2018), employees may resist the adoption of new technology due to fear of job loss or a lack of trust in the new system. This resistance can lead to a delay in the implementation of e-procurement systems, resulting in lost time and potential cost savings.

Another challenge in implementing e-procurement is the implementation and integration of the new systems with existing systems and processes. According to Srivastava et al. (2016), the integration of e-procurement systems with existing systems can be challenging, as it requires significant changes to the organization's processes and systems. Moreover, the cost of implementing e-procurement systems can be a significant challenge for organizations, particularly those with limited resources. As noted by Bhatia and Singh (2017), the cost of implementing e-procurement systems can be high, including the cost of hardware, software, and training. As noted by Touboulic et al. (2019), integrating e-procurement systems with other existing systems such as enterprise resource planning (ERP) systems can be complex and time-consuming. This can result in delays in the implementation of the system and may require significant investment in IT infrastructure.

Data security is also a significant challenge in e-procurement implementation. As noted by Singh et al. (2018), the use of e-procurement systems can result in the collection and storage of sensitive data. E-procurement involves the collection, storage, and transmission of sensitive data, such as financial information and supplier data. This information is often valuable to cybercriminals, making e-procurement systems a potential target for data breaches. As noted by Singh et al. (2018), the use of e-procurement systems can result in the collection and storage of sensitive data, such as vendor information, procurement records, and financial data. This means that data security is critical to ensure that such data is not compromised. Data security breaches can result in significant financial and reputational losses to organizations. Therefore, organizations need to ensure that their e-procurement systems have adequate security measures in place to protect against unauthorized access or data breaches. According to Singh et al. (2018), data breaches can result in severe consequences, including financial losses, reputational damage, and legal liabilities. Measures to prevent data breaches may include firewalls, data encryption, and access controls. However, implementing these security measures can be

challenging, as they require significant investments in terms of time, money, and expertise. Moreover, the effectiveness of security measures can be limited if employees do not follow security protocols or if the system is not regularly monitored for potential security threats. As a result, organizations must be vigilant and proactive in managing data security risks in e-procurement implementation.

Another challenge is the standardization of procurement processes. As noted by Gunasekaran et al. (2018), e-procurement systems require standardized procurement processes to be effective. Standardization is essential for the effective functioning of e-procurement systems, as noted by Gunasekaran et al. (2018), as it allows for consistent processes to be applied across the supply chain. However, implementing standardized processes can be challenging, particularly in organizations with complex supply chains. This is because standardization requires collaboration and communication between all parties involved in the supply chain, including suppliers, distributors, and internal departments, which can be difficult to achieve in practice. Furthermore, implementing standardized processes often requires a significant change in the way procurement is conducted, which can be met with resistance from employees and stakeholders. This resistance can be due to a lack of understanding or perceived loss of control over procurement processes. As a result, it is crucial for organizations to communicate the benefits of standardization, such as increased efficiency and cost savings, and involve all stakeholders in the development and implementation of standardized procurement processes. In summary, the standardization of procurement processes is essential for the successful implementation of e-procurement systems, but it requires collaboration, communication, and buy-in from all parties involved in the supply chain.

Another challenge is the cost involved. Kumar et al. (2018) note that e-procurement systems require significant investment in IT infrastructure, training, and support. The costs involved can be significant, particularly for organizations with limited resources. The high upfront costs associated with e-procurement systems can be a barrier to adoption for many organizations, and this can lead to a reluctance to implement e-procurement systems. In addition, the ongoing maintenance costs of e-procurement systems can also be a significant burden, particularly if the system requires regular updates or customization to meet the organization's changing needs. Another challenge that organizations face when implementing e-procurement systems is the need to integrate the system with existing procurement processes. As noted by Obeidat et al. (2018), integrating e-procurement systems with existing processes can be a complex process that requires careful planning and management. This challenge can be particularly acute in

organizations with complex supply chains, where the integration of e-procurement systems can be particularly challenging. Additionally, the issue of data security remains a challenge in e-procurement implementation. The use of e-procurement systems can result in the collection and storage of sensitive data, which must be protected against unauthorized access or data breaches. Finally, resistance to change can be a significant challenge in e-procurement implementation. As noted by Li et al. (2018), employees may resist the adoption of new technology due to fear of job loss or a lack of trust in the new system. Therefore, it is essential to provide training and support to employees to ensure that they understand the benefits of the new system and are comfortable with its use. In summary, the implementation of e-procurement systems can be challenging for organizations, and it requires careful planning, management, and investment in IT infrastructure, training, and support.

2.4 Summary of literature

This chapter has reviewed the literature on e-procurement and its impact on supply chain performance. The chapter has discussed the relationship between e-procurement and supply chain performance, the importance of electronic order processing in supply chain management, and the challenges encountered in the implementation of e-procurement systems. The next chapter will present the research methodology used in this study to examine the relationship between e-procurement and supply chain performance at the International Rescue Committee.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology and presents the data collection techniques that were used to investigate the impact of E-procurement on supply chain performance of Non-Government Organizations (NGOs) with a case study of the International Rescue Committee (IRC). The research was guided by three specific objectives: to establish the relationship between E-procurement and supply chain performance at the International Rescue Committee, to examine how electronic order processing impacts supply chain performance at the International Rescue Committee, and to assess the challenges encountered in the implementation of E-procurement at the International Rescue Committee.

3.2 Research Design

The research adopted a quantitative research approach, which involved the collection and analysis of numerical data using statistical methods. The research design was a case study, which involved the study of a single organization - the International Rescue Committee (IRC). The case study approach was chosen because it allowed for an in-depth investigation of the impact of E-procurement on supply chain performance at the IRC. The study was also exploratory, as it sought to explore the relationship between E-procurement and supply chain performance at the IRC.

3.3 Study population

The study considered 30 staff members who were involved in the procurement process and other departments at the International Rescue Committee.

3.4 Sampling techniques

Simple random selection procedure was used to ensure adequate representation. Before selecting a sample, the population was divided into sampling units then each unit was used to establish a sampling rate. To single out the categories of respondents in the survey, a stratified random sampling technique was used.

3.5 Data collection sources

Primary and secondary forms of data were used for data collection.

3.5.1 Primary data

Primary data was obtained from respondents by the researcher through the use of interviews and questionnaire methods of data collection as it was more accurate and reliable for the specific purposes of the study.

3.5.2 Secondary data

Secondary data was collected from text books, journals, magazines and newspaper articles. More so, internet journals and using google search engine that avails different articles and information on websites like library.net.

3.6 Methods of data collection

A pre-tested close ended questionnaire and direct observation was used for data collection.

3.6.1Questionaire method

Through the questionnaire method, the researcher distributed the questionnaires and all respondents were asked the same questions to which they answered by selecting the best alternatives of their choice for the questions by choosing any of these; strongly agree (S/A), agree (A), not sure (N/S), disagree (D) and strongly disagree (S/D).

3.6.2 Interview method

The interview method was also used through approaching the organization's procurement officers and other departments. The researcher also asked them different questions which they answered instantly.

3.7 Data collection procedure

A letter was obtained from UCU School of business so as to easily collect data with an identity of the university as a student carrying out research.

3.8 Data Analysis, interpretation and presentation

The data collected through the survey was analyzed using descriptive statistics and inferential statistics. Descriptive statistics was used to summarize the data, while inferential statistics was used to test the hypotheses formulated in the study. The statistical package for social sciences (SPSS) software was used to analyze the data. The study also used regression analysis to establish the relationship between E-procurement and supply chain performance at the IRC. The study also used t-tests to determine the significance of the differences in supply chain performance between the period before and after the implementation of E-procurement at the IRC.

3.9 Limitations of the Study

- The study was limited by the sample size, as the study only focused more on the procurement department staff at the IRC.
- The study was also limited by the self-administered questionnaire, which relied on the honesty and accuracy of the respondents.
- The study was also limited by the case study approach, which limits the generalizability of the findings to other NGOs.

3.10 Conclusion

This chapter presented the research methodology that was used to investigate the impact of E-procurement on supply chain performance of NGOs with a case study of the International Rescue Committee. The study used a quantitative research approach, with data that was collected through a self-administered questionnaire. The data was analyzed using descriptive and inferential statistics.

CHAPTER FOUR

DATA ANALYSIS, INTEPRETATION AND PRESENTATION OF THE FINDINGS

4.0 Introduction

This chapter includes the analysis, interpretation and presentation of the data given by the respondents and discusses the findings of the entire study with reference to e-procurement and supply chain performance, a case of the international rescue committee. The researcher used a questionnaire as a tool to obtain data from the field. Some of the characteristics considered included gender of respondents, academic qualifications, education level, departments in which they work in the organization among others.

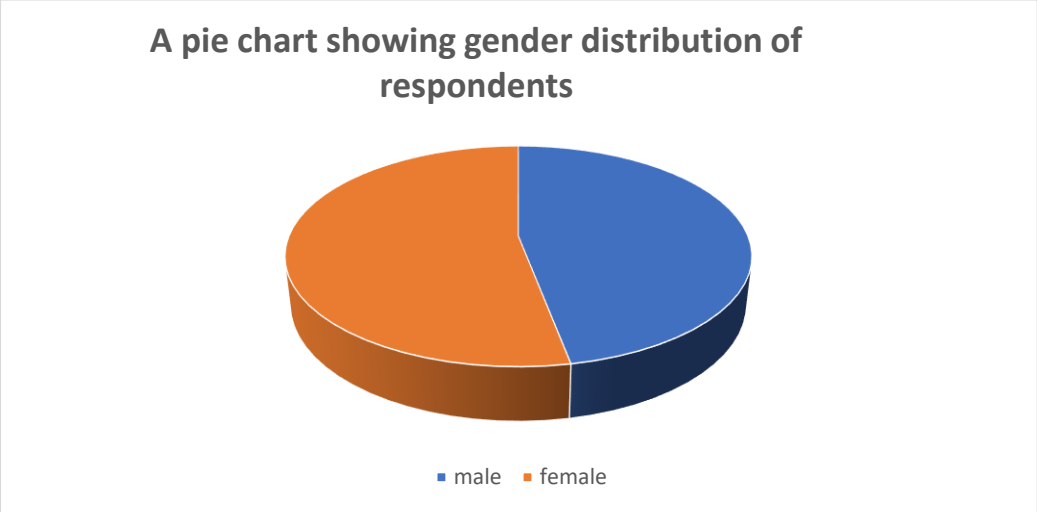
4.1 Findings on Bio-data of the respondents.

4.1.1 Findings on gender of respondents.

Gender	**Frequency(f)**	**Percentage (%)**
male	14	47%
female	16	53%
Total	**30**	**100%**

From the information above, the distribution of the respondents according to their gender shows that majority of the respondents 16(53%) were female and the male were 14(47%). Female respondents were more than male respondents implying the organization strives for gender equality, diversity and inclusion of women at work.

Figure 1: Gender distribution of respondents

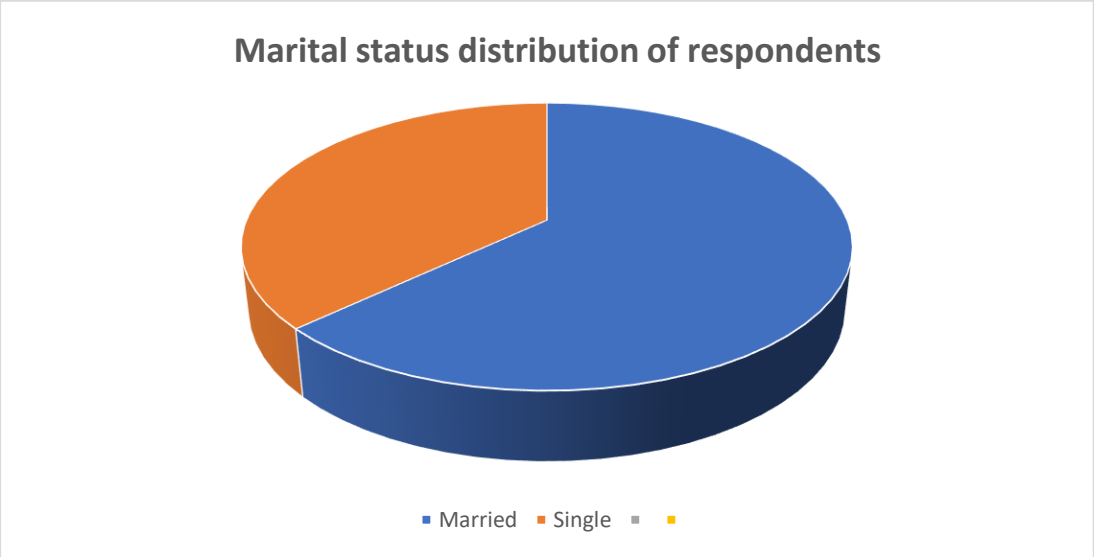


4.1.2 Findings on marital status of respondents

Marital status	Frequency(f)	Percentage (%)
Married	19	63%
Single	11	37%
Total	**30**	**100%**

From the table above, 63% of the total respondents (19) were married and 37% of the total respondents were single. This implies the organization strives for the impact of marital status as it is an important aspect because it is linked with performance, job satisfaction and organizational commitment and work.

Figure 2: Marital status distribution of respondents



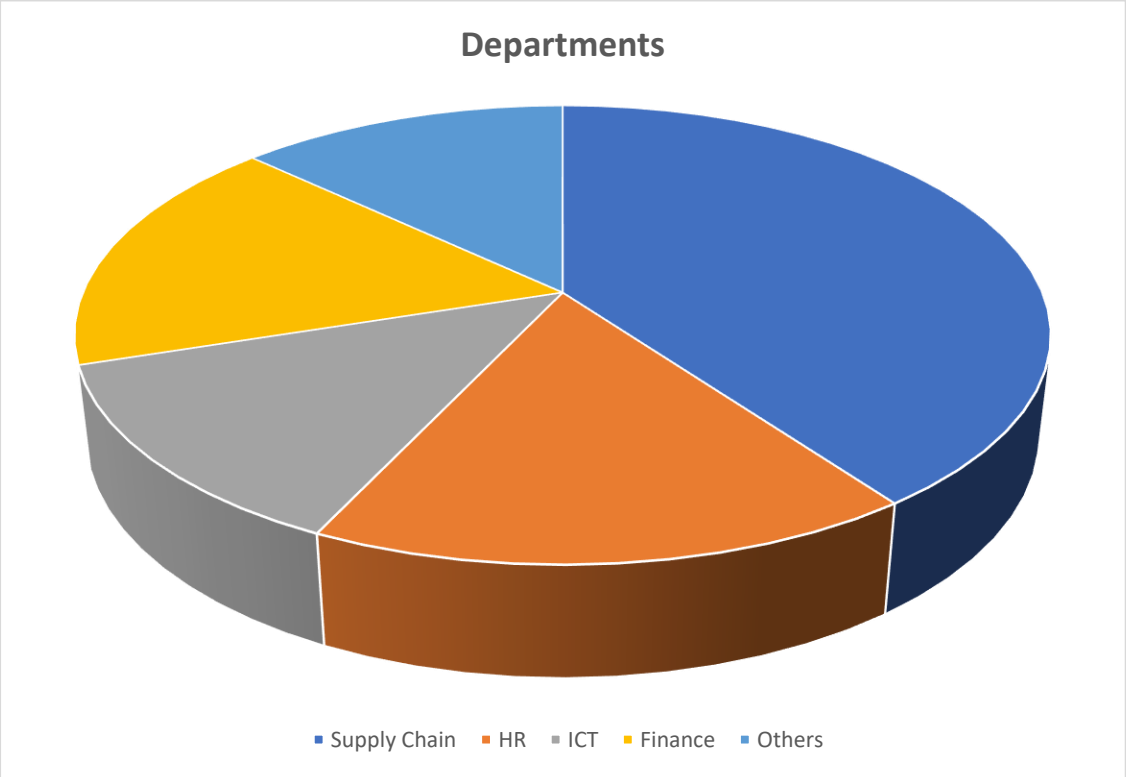
4.1.3 Findings on the departments in which the respondents work.

Department	Frequency(f)	Percentage (%)
Supply chain	12	40%
Human Resource	5	17%
ICT	4	13%
Finance	4	13%
Others (Grants & programs)	5	17%
Total	**30**	**100%**

From the information above, the distribution of the respondents according to department shows that the majority of the respondents 12(40%) were from supply chain, 5(17%) were from

Human Resource, 4(13%) from ICT and finance and 5(17%) of the respondents were from other departments identified as Grants and programs. This implies that the organization has a number of departments that provide the infrastructure necessary for the effective delivery of its projects and programs.

Figure 3: Percentage distribution of respondents according to departments.

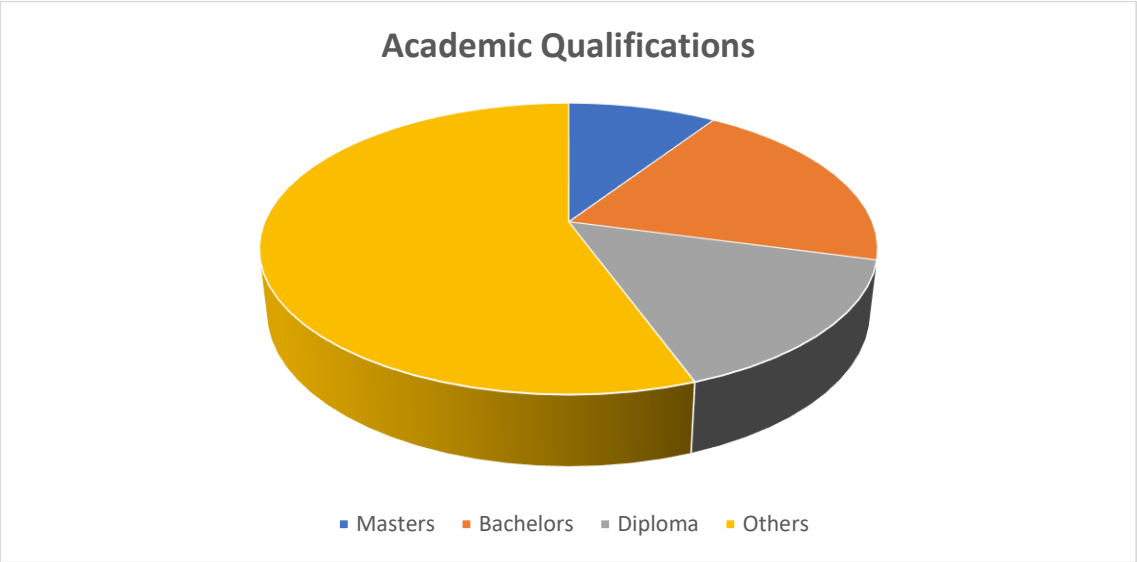


4.1.4 Findings on Academic Qualifications of the respondents.

Level of Education	**Frequency(f)**	**Percentage (%)**
Masters	6	20%
Bachelors	13	43%
Diploma	10	33%
Others, Certificate	1	4%
Total	**30**	**100%**

From the table above, 20% of the total respondents (6) were Masters Holders, 43% (13) were Bachelor's degree holders, 33% (10) were Diploma holders and 4% (1) had other qualifications identified as Certificate. This shows that the organization employs skilled and educated and knowledgeable employees who perform to high expectations.

Figure 4: Percentage distribution of respondents according to academic qualification.

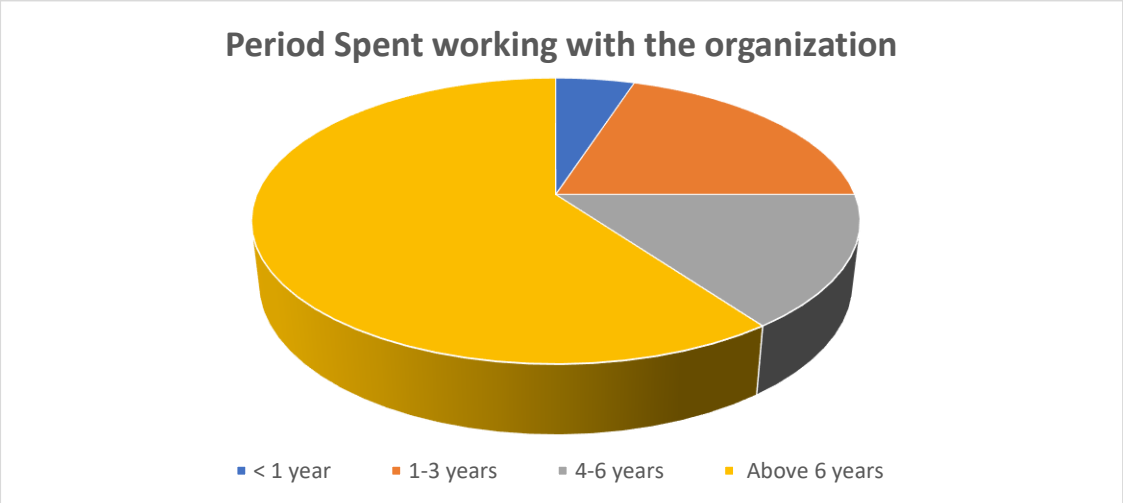


4.1.5 Findings on the period spent working with the Organization

Period (years)	**Frequency(f)**	**Percentage (%)**
< 1 year	3	10%
1-3 years	12	40%
4-6 years	9	30%
Above 6 years	6	20%
Total	**30**	**100%**

As seen from the table above, 10% of the respondents had spent less than a year working with the International Rescue Committee, 40% had spent between 1-3 years, 30% had spent between 4-6 years and 20% had spent more than 6 years. This implies that the respondents had experience due to practice making perfect and having been doing the same activities year in year out, therefore were well informed about the operations of the organization.

Figure 5: Percentage distribution of respondents according to period spent working with the Organization.



4.2. Findings on the relationship between e-procurement and supply chain performance

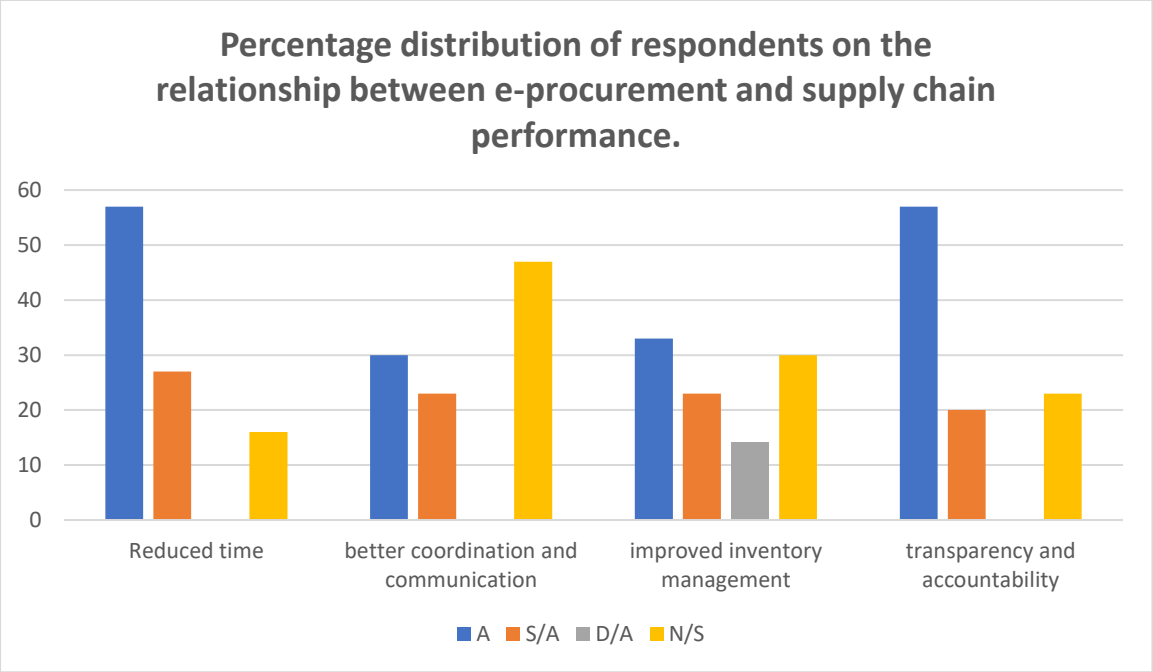
Below are the responses from the respondents in relation to Agree (A), strongly agree(S/A), don't agree (D/A) and Not sure (N/S).

S/N	**Categories**	**A**		**S/A**		**D/A**		**N/S**		TO	TAL
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**T/F**	**T/%**
A	Reduced time	17	57%	8	27%			5	16%	30	100
B	Better coordination and communication	9	30%	7	23%			14	47%	30	100
C	Improved inventory management	10	33%	7	23%	4	14%	9	30%	30	100
D	Transparency and accountability	17	57%	6	20%			7	23%	30	100

From the table above, research results reveal that there is a relationship between e-procurement and supply chain performance as 57% of the respondents agreed that there is reduced time, 27% strongly agreed while 16% of the respondents were not sure. 30% of the respondents also agreed that there is better coordination and communication of supply chain activities which is essential to achieve efficient supply chain performance, 23% also strongly agreed while 47% were not sure whether there is effective coordination. 33% of the respondents also agreed that there is improved inventory management, 23% strongly agreed, 14% did not agree while 30% were not sure. 57% of the respondents agreed that there is transparency and accountability

which increases trust among supply chain partners, 20% strongly agreed while 23% were not sure. The results states that there is a strong positive relationship between e-procurement and supply chain performance at the International Rescue Committee implying e-procurement directly affects supply chain performance.

Figure 6. The relationship between e-procurement and supply chain performance



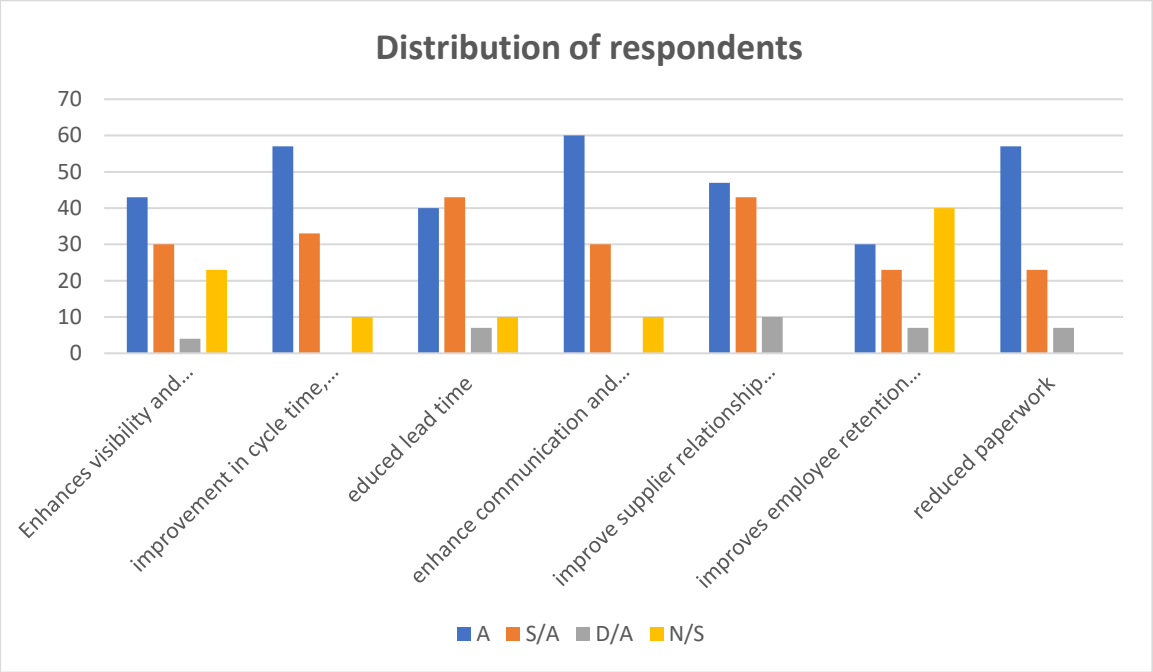
4.3. Findings on the impact of electronic order processing on supply chain performance.

Below are the responses from the respondents in relation to Agree (A), strongly agree(S/A), don't agree (D/A) and Not sure (N/S).

S/N	Categories	A		S/A		D/A		N/S		TO	TAL
		f	%	f	%	f	%	f	%	F	%
A	Enhances visibility and transparency	13	43%	9	30%	1	4%	7	23%	30	100
B	Improvement in procurement cycle time, order accuracy and on-time delivery	17	57%	10	33%			3	10%	30	100
C	Reduced lead times	12	40%	13	43%	2	7%	3	10%	30	100
D	Enhance communication and collaboration between buyers and suppliers	18	60%	9	30%			3	10%	30	100
E	Improve supplier relationship management	14	47%	13	43%	3	10%			30	100
F	Improves employee retention rate	9	30%	7	23%	2	7%	12	40%	30	100
G	Reduction of transactional costs due to reduced paper work	17	57%	7	23%	2	7%	4	13%	30	100

From the table above, the research results indicate that 43% of the respondents agree that electronic order processing enhances visibility and transparency within the supply chain, 30% strongly agreed while 4% did not agree and 23% of the respondents were not sure. 57% of the respondents also agreed that electronic order processing improves procurement cycle time, order accuracy and on-time delivery while 33% strongly agreed and 10% were not sure. 40% of the respondents also agreed that there is reduced lead time, 43% strongly agreed while 7% did not agree and 10% were not sure whether electronic order processing impacts supply chain performance. 60% of the respondents agreed that electronic order processing enhances communication and collaboration between buyers and suppliers while 30% strongly agreed and 10% of the respondents were not sure. 47% of the respondents also agreed that electronic order processing improves supplier relationship management while 43% strongly agreed and 10% did not agree. 30% of the respondents agreed there is improvement in employee retention rate, 23% strongly agreed while 7% did not agree and 40% of the respondents were not sure. 57% of the respondents also agreed that there is reduction of transactional costs due to reduced paperwork, 23% strongly agreed while 7% did not agree and 13% of the respondents were not sure. This implies that time is of the essence and a primary objective at the organization as one way of achieving client satisfaction and that the organization also puts emphasis in building long and lasting relationships with its suppliers.

Figure 7. Impact of electronic order processing on supply chain performance



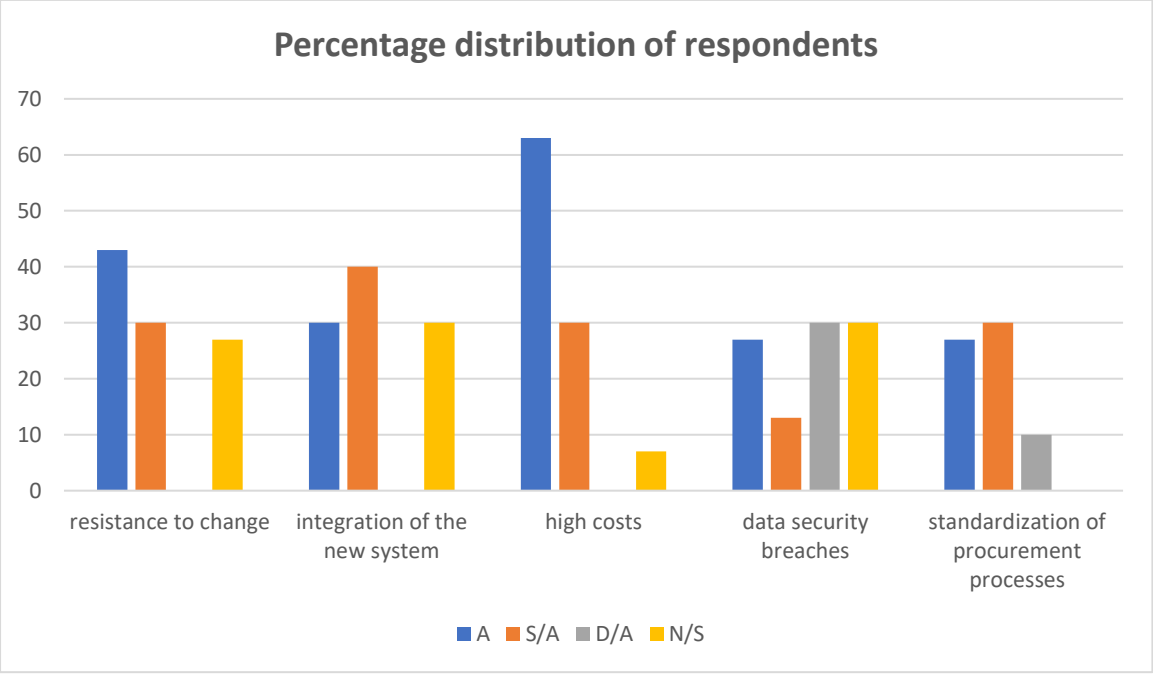
4.4. Findings on the challenges encountered in the implementation of e-procurement.

Below are the responses from the respondents in relation to Agree (A), strongly agree(S/A), don't agree (D/A) and Not sure (N/S).

S/N	Categories	A		S/A		D/A		N/S		TO	TAL
		f	%	f	%	f	%	F	%	T/F	T/%
A	Resistance to change	13	43%	9	30%			8	27%	30	100
B	Integration of the new system with existing systems & processes	9	30%	12	40%			9	30%	30	100
C	High costs of implementation	19	63%	9	30%			2	7%	30	100
D	Data security breaches	8	27%	4	13%	9	30%	9	30%	30	100
E	Standardization of procurement processes	8	27%	9	30%	3	10%	10	33%	30	100

From the table above, the research results states that the organization has actually faced a number of challenges in implementing e-procurement as 43% of the respondents agreed that there is resistance to change while 30% strongly agreed and 27% were not sure. 30% of the respondents also agreed that there is a challenge of integrating the new system with existing systems and processes within the organization while 40% strongly agreed to that and 30% were not sure. 63% also agreed that its costly implementing e-procurement while 30% strongly agreed and 7% were not sure. 27% of the respondents agreed that implementation of e-procurement is associated with data security breaches, 13% strongly agreed while 30% did not agree and 30% were not sure. 27% of the respondents agreed that implementing standardized processes can be challenging which can be met with resistance from employees, 30% strongly agreed while 10% did not agree and 33% of the respondents were not sure. This simply means that implementing e-procurement and its mechanism within the organization's procurement operations has faced a number of challenges.

Figure 8. The challenges encountered in the implementation of e-procurement.



CHAPTER FIVE

DISCUSSIONS, SUMMARY, CONCLUSION AND RECOMMENDATIONS OF THE FINDINGS.

5.0. Introduction

This chapter presents the major findings in chapter four and in reference to the objectives of the study hence forth draws discussions, summary, conclusion and recommendations of the findings.

5.1. Discussion of the findings.

5.1.1. Discussion of the findings on the relationship between e-procurement and supply chain performance.

In examining the relationship between e-procurement and supply chain performance from the table above, research results revealed that there is a relationship between e-procurement and supply chain performance as 57% of the respondents agreed that there is reduced time, 27% strongly agreed while 16% of the respondents were not sure as stated similarly as stated that E-procurement improves supply chain performance by reducing procurement cycle time, increasing procurement accuracy, reducing procurement cost, and enhancing supplier management (Kumar et al., 2018).

From the research study above, there is a relationship between e-procurement and supply chain performance as 33% of the respondents agreed that there is improved inventory management, 23% strongly agreed, 14% did not agree while 30% were not sure. (Chang et al., 2019) stated that e-procurement can also improve inventory management by providing real-time inventory data and enabling more efficient inventory control thus achieving efficient supply chain performance.

Furthermore, 30% of the respondents also agreed that there is better coordination and communication of supply chain activities which is essential to achieve efficient supply chain performance, 23% also strongly agreed while 47% were not sure whether there is effective coordination similarly (Zhu et al. ,2019) stated that effective coordination of the various supply chain activities, including procurement, production, inventory management, and distribution, is essential to achieve efficient supply chain performance. Overall, the research findings

suggest that e-procurement has had a positive impact on the supply chain performance of the international rescue committee.

5.1.2 Discussion on the impact of electronic order processing on supply chain performance at the IRC

In examining the roles of electronic order processing on supply chain performance at the International Rescue Committee (IRC), research findings revealed that electronic order processing has played a crucial role in enhancing the supply chain performance of the organization. One of the significant benefits is that it enhances visibility and transparency as seen in the table above results indicated that 43% of the respondents agreed that electronic order processing enhances visibility and transparency within the supply chain, 30% strongly agreed while 4% did not agree and 23% of the respondents were not sure. Similarly, Seol et al. (2019) reported that electronic order processing enhances visibility and transparency in the supply chain, leading to better inventory management and lower costs.

The findings of the study also revealed that electronic order processing has a significant impact on supply chain performance at the International Rescue Committee as 57% of the respondents agreed that electronic order processing improves procurement cycle time, order accuracy and on-time delivery while 33% strongly agreed and 10% were not sure, similarly, Lee et al. (2020) found that electronic order processing leads to significant improvements in procurement cycle time, order accuracy, and on-time delivery. This implies that the use of electronic order processing can help streamline procurement processes and improve order accuracy, resulting in a more efficient and effective supply chain.

In addition, 40% of the respondents also agreed that there is reduced lead time, 43% strongly agreed while 7% did not agree and 10% were not sure whether electronic order processing impacts supply chain performance. Similarly, as stated that electronic order processing can help reduce lead times by enabling faster processing of orders and improving communication between suppliers and buyers (Kumar et al., 2018). This can help improve on-time delivery, which is crucial in ensuring that products are available when needed. Overall, the literature suggests that electronic order processing has a positive impact on supply chain performance, and its implementation can result in significant benefits for organizations.

5.1.3 Discussion on the Challenges encountered in the implementation of e-procurement at the International Rescue Committee.

Through the study, the research results states that the organization has actually faced a number of challenges in implementing e-procurement as 43% of the respondents agreed that there is resistance to change while 30% strongly agreed and 27% were not sure. According to Li et al. (2018), employees may resist the adoption of new technology due to fear of job loss or a lack of trust in the new system. This resistance can lead to a delay in the implementation of e-procurement systems, resulting in lost time and potential cost savings.

Another challenge is the integration of the new system with existing systems and processes as the research findings stated that 30% of the respondents agreed that there is a challenge of integrating the new system with existing systems and processes within the organization while 40% strongly agreed to that and 30% were not sure. According to Srivastava et al. (2016), the integration of e-procurement systems with existing systems can be challenging, as it requires significant changes to the organization's processes and systems.

Furthermore, 63% of the respondents agreed that its costly implementing e-procurement while 30% strongly agreed and 7% were not sure. Moreover, the cost of implementing e-procurement systems can be a significant challenge for organizations particularly those with limited resources as noted by Bhatia and Singh (2017), the cost of implementing e-procurement systems can be high, including the cost of hardware, software and training as this could possibly result inn delays in the implementation of the system and may require investment in IT infrastructure.

5.2. Summary of the findings.

This study has demonstrated that e-procurement has a positive relationship with supply chain performance at the International Rescue Committee as majority (55%) of the respondents strongly agreed and agreed that there is a relationship between e-procurement and supply chain performance such as reduced time, better coordination and communication and improved inventory management.

The study has also shown that electronic order processing has a significant impact on supply chain performance at International Rescue Committee as majority (70%) of the respondents strongly agreed and agreed that e-procurement enhances visibility and transparency,

improvement in procurement cycle time and improvement in supplier relationship management.

However, the implementation of e-procurement systems in Non-Government Organizations such as International Rescue Committee is not without its challenges as the research results indicate that majority of the respondents (60%) strongly agreed and agreed that the implementation of e-procurement and it's mechanisms within the organization's procurement operations has faced a number of challenges such as resistance to change, integration of the new system with existing systems and processes and high costs of implementation of e-procurement.

5.3. Conclusion

In conclusion, the research study has highlighted the importance of e-procurement in enhancing supply chain performance at the International Rescue Committee. The findings have shown that e-procurement has a significant positive relationship with supply chain performance, and electronic order processing plays a critical role in streamlining the procurement process and improving supply chain performance. However, the implementation of e-procurement faces various challenges such as resistance to change, integration of the new system with existing systems and processes and high cost of implementation. Overall, the study highlights the potential benefits of e-procurement in enhancing supply chain performance in humanitarian organizations, and provides insights into the challenges that need to be addressed to ensure successful implementation.

5.4. Recommendations

There's need for the International Rescue Committee to look into strengthening the training of staff as the research findings indicate that 73% of the respondents strongly agreed and agreed that there is resistance to change. It is important to provide adequate training to staff members on how to use the e-procurement system and its benefits. By prioritizing training and development programs for procurement staff they ensure that they have the necessary skills and knowledge to use the e-procurement system effectively. This will not only improve the effectiveness and efficiency of the procurement process, but also reduce the occurrence of errors and mistakes. This would improve the efficiency and effectiveness of the supply chain processes, leading to better performance.

Secondly, the organization should consider investing in more advanced e-procurement systems that can provide real-time visibility of the entire procurement process, automate procurement

processes, and provide data analytics capabilities this is as indicated by the findings that 50% of the respondents strongly agreed and agreed that standardization of procurement processes can be challenging. This will help the organization to identify inefficiencies and bottlenecks in the procurement process, and make more informed decisions that will enhance supply chain performance.

The greatest benefits of e-procurement occur when its application is fully integrated through the supply chain as this brings up the possibilities of greater integration in collaboration across e-business supported supply chains. Therefore, organizations should make sure that integration of the e-procurement throughout the supply chain is achieved for realization of the long term goals in the ever dynamic global environment, this is as a result of the findings as majority of the respondents 70% strongly agreed and agreed that integration of the new systems with existing systems and processes can be challenging in the implementation of e-procurement in organizations.

Addressing procurement staff resistance is crucial to the successful implementation of e-procurement systems as the research findings indicate that 73% of the respondents strongly agreed and agreed that there is resistance to change. The organization should invest in training programs to educate procurement staff on the benefits of using the system and address any concerns or fears they may have. Involving staff in the design and implementation process can also increase their buy-in and ensure that the system meets their needs. Additionally, it is important to establish clear communication channels to ensure that staff can provide feedback and receive support when needed.

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A bachelor's student who is seeking permission from your office to collect data for his/her dissertation titled

"THE IMPACT OF E-PROCUREMENT ON SUPPLY CHAIN PERFORMANCE"

We shall be grateful if you could render assistance to him/her in collecting the necessary data for his/her dissertation

The Uganda Christian University School of Business thanks you in advance

Mukisa Simon Peter
Research coordinator