CONTRIBUTION OF ELECTRONIC BUSINESS PRACTICES ON PERFORMANCE OF SUPERMARKET PROCUREMENT FUNCTION IN TANZANIA

A CASE OF SELECTED SUPERMARKETS IN DAR ES SALAAM

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A CASE OF SELECTED SUPERMARKETS IN DAR ES SALAAM

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Award of Master of Science in Procurement and Supply Chain management (MSc PSCM) Degree of Mzumbe University

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled: ***Contribution of Electronic Business Practices on Performance of Supermarket Procurement Function in Tanzania: The Case of Selected Supermarkets in Dar es Salaam,*** in partial/fulfillment of the requirements for award of the degree of Master of Science in Procurement and Supply Chain Management of Mzumbe University, Tanzania.

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Major Supervisor

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Internal Examiner

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DECLARATION AND COPYRIGHT

I, **Alfaksadi Y. Matekere** declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature_____

Date _____

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DEDICATION

I heartily dedicate this work to my parents Mr & Mrs Yona Matekere. Their love, encouragement, tolerance, and assistance have made me to be who I am. May the Almighty God bless them.

LIST OF ABBREVIATIONS

ANOVA	-	Analysis of Variance
EBP	-	Electronic Business Practices
EDI	-	Electronic Data Interchange
ERP	-	Enterprise Resource Planning
ICT	-	Information and Communication Technology
IDT	-	Innovation Diffusion Theory
IT	-	Information Technology
PPA	-	Public Procurement Act
PPRA	-	Public Procurement Regulatory Authority
PPOA	-	Public Procurement Oversight Authority
PMU	-	Procurement Management Unit
TCE	-	Transaction Cost Economics

ABSTRACT

The main objective of this study was to assess the contribution of electronic business practices on performance of supermarket procurement function in Tanzania. Specifically the study aimed at determining the effect of e-inventory management systems on performance of supermarket procurement function, establishing the effect of e-sourcing on performance of supermarket procurement function, evaluating the effect of e-payment on performance of supermarket procurement function, and assessing the effect of e-archiving on performance of supermarket procurement function.

The study was carried out at CHOPPIES, TSN and VILLAGE supermarkets in Dar es Salaam, adopting both qualitative and quantitative approaches under the case study design. Simple random, purposive and convenience sampling techniques were used to select 75 respondents whereas questionnaires and interviews were used to collect data. The collected data were analyzed through content analysis, descriptive statistics and multiple linear regression.

The findings show that there is a positive significant relationship between, e-inventory management system, e-sourcing, e-archiving and the performance of supermarket procurement function. On the other hand it was revealed that there is negative significant relationship between e-payment and performance of supermarket procurement function.

The study recommends that the government of Tanzania should insist on application of electronic systems in procurement activities throughout the public institutions in order to achieve the advantages which the private organizations obtain in using electronic systems. Furthermore academicians should conduct more researches concerning application of electronic systems in procurement activities which in turn will stimulate adoption of e-procurement in ensuring efficiency and effectiveness in the government and private operations.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter introduces the study in eight sections including introduction, background of the problem, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study and study limitations.

1.2 Background of the Problem

Electronic business practices is the function of information and communication technology (ICT) defined as the continuously process of investing in information and communication technology and applying it in transforming various business processes such as management, finance, production and market research (Gichane & Moronge, 2018). Electronic business practices involves transacting business through online network with business partners and other stakeholders including individual companies/organizations, customers and governments. Through electronic business practices platform, organizations can enjoy real-time reporting of business activities which in turn significantly enhance effective performance of business transactions. The most advantageous impact resulting from the adoption of electronic business practices have been rapidly enhancing organization and integration of supply chain partners.

Organizations are under increasing pressure to grow profitably in a rapidly changing and competitive business environment. The competitive business environment has forced organizations to operate strategically and hence application of information and communication technology (ICT) as a means of increasing competitive advantage in their business process (Mumassabba, 2015). Recently, the application of ICT and internet in facilitating various business transactions has advanced evidenced by increasing number of the businesses using internet in transactions occurring between different business entities and also between businesses and

customers (Mohammed, 2012). Pani and Agrahari (2011) argues that organizations are increasingly engaging in e-business using information and communication technologies and the internet. The utilization of the Internet in inter-organizational relations is an important knowledge-based innovation that is of great interest to both academia and businesses.

The use of electronic technology in automation of business operations started early in the 1960's when Electronic Data Interchange (EDI) was introduced. Since its launch, EDI had been facilitating the automation of purchasing transaction between buyers and sellers. In 1970's Enterprise Resource Planning (ERP) emerged, followed by the commercial use of internet in the 1980's, and then the universal application in the 1990's (Saleemi, 2006).

The advancement of information and communication technology (ICT) and internet has recently gained popularity around the world, driven by the benefits realized through its application in different undertakings. Information and communication technology is exposing what is happening in the developed countries resulting into several improvements in terms of social welfare and economic changes (Mohammed, 2012).

Supermarkets as an identified retail sector firms are among the firms that highly using electronic business practices as their management and operational tool of day to day operations. The retail industry is one of the significant sectors of an economy (Howard, 2001; Dragun and Knight, 2001; McGurr, 2002). Musau (2015) asserts that the sector is not only contributing to the national GDP, it also facilitates acquirement of day-to-day consumables for both individuals at the household level and corporate.

Supermarkets in developed countries are performing very well one of the reasons behind being the utilization of information and communication technology to integrate supermarkets and their suppliers therefore reducing some costs to a great extent. For instance supermarkets in United States are employing electronic business systems with the main goal of being able to achieve operational efficiency. Wal-Mat can be traced as one of the first supermarket to apply information and

communication technology in its operations, whereby through ICT platforms it has been able to link the business to suppliers, resulting into increased operational efficiency (Gichane & Moronge, 2018). Smith (2012) reported that the introduction of electronic business practices in United States food industry facilitated the process of linking suppliers and customers (business) and enabled a 40% cut of costs incurred along the supply chain.

The situation is different in developing countries whereby by apart from having multinational supermarkets and few local supermarkets, they are not doing well. In Tanzania a closure of some famous supermarkets such as Uchumi and Nakumatt can be considered to be an example of poor performance. Nakumatt was a wholly Kenyan private held company owned by Atul Shah Family, having five branches in Tanzania which were all closed recently (Ongola, 2017). The same happened to Uchumi supermarket in Tanzania.

Some of identified electronic technologies that have been employed by supermarkets in their daily operations include e-inventory management systems, e-sourcing, e-payment, e-marketing and e-achieving/record keeping (Gichane & Moronge 2018). All these have a significant impact on the performance of the procurement function in organizations.

Simiyu and Simba (2016) declares that adoption of information and communication technology as a means of enhancing business has served as a standard for major changes in the operation and status of organizational procurement. It is evident that Information Technologies have totally transformed the way organizations operate. Employment of electronic business practices in procurement requires the overall change in the supply chain process. The process involves automation of procurement process in identification, sourcing, bidding, payment, inventory management and managing the relationship with suppliers (Munubi., *et al*. 2017). Electronic technology consolidates the supply chain functions into a single function and hence satisfaction, efficiency and improved performance of the organizational procurement.

Procurement function has much to do with the performance of any organization due to the fact that the goal of each organization is to increase efficiency in its operations while cutting the operational costs. The performance is boosted in terms of profitability and return of capital. With effective procurement function, organizations can be able to achieve all the intended objectives. Effective performance of procurement function leads to improved overall performance of organizations because large amount of organization's money are spent through procurement function (Snider & Rendon, 2001). Procurement function is an important function to any organization because through it the strategic objectives of the organization can be met provided that there is good coordination and link to other sectors (Munubi., *et al*. 2017). The arrival of electronic business practices such as e-inventory management systems, e-sourcing, e-payment and e-archiving/recordkeeping seems to overcome the shortcomings of the measures put in place to check losses arising through procurement function including procurement of substandard goods, failure in managing inventory and also procuring goods and services at very high prices.

1.3 Statement of the Problem

Since e-business is a continuous process of investing in information and communication technology (ICT) and internet manifesting through transforming various business processes such as management, finance, production and market research, the key question is that can e-business practices help to enhance the performance of procurement function and lead to effective organizational performance in Tanzanian context? E-business is claimed to simplify various business processes in the organization but there are still some resistances to adopt it in Tanzania and thus important to study and come up with evidence on whether E-business is likely to improve the performance of procurement function in Tanzanian context.

Reviewed studies seem to concentrate on the automation of business process including e-business and e-procurement worldwide. Gichane and Moronge (2018) conducted a study on the influence of electronic business practices on the performance of supermarkets in Nairobi. The study found that e-inventory

management systems, e-sourcing, e- payment and e-marketing are greatly influencing the performance of the organizations. The study mainly focused on the overall performance of supermarkets, thus different from this study which focused on the performance of supermarket procurement function. Another study was conducted by Makali (2015) on the e-procurement and procurement performance of supermarkets in Nairobi. The Kenyan context in terms of supermarket business is quite different from Tanzania thus a need for this study in Tanzanian context.

Studies that have been carried out on e-procurement and supermarkets in Tanzania, these include the studies conducted by Suleiman (2015) on adoption of e-procurement and value addition to Tanzania public institutions and Sierra (2015) on the supermarkets procurement practices in Dar-es-salaam focusing at risks and benefits for rural small holders farmers. The conducted studies did not specifically focus on the contribution of electronic business practices on performance of supermarkets procurement function in Tanzania, with a noted increase of supermarkets. To address the gap, this study focused on the contribution of electronic business practices on performance of Supermarket procurement function, using three selected supermarkets in Dar-es-salaam.

1.4 Objectives of the Study

General and specific objectives were considered important in meeting the intended purpose of the study.

1.4.1 General Objective

To assess the contribution of electronic business practices on performance of supermarket procurement function in Tanzania

1.4.2 Specific Objectives

i. To determine the effect of e-inventory management systems on performance of supermarket procurement function in Tanzanian context.

ii. To establish the effect of e-sourcing on performance of supermarket procurement function in Tanzanian context.

iii. To evaluate the effect of e-payment on performance of supermarket procurement function in Tanzanian context.

iv. To assess the effect of e-archiving on performance of supermarket procurement function in Tanzanian context.

1.5 Research Questions

i. What is the effect of e-inventory management systems on performance of supermarket procurement function in Tanzanian context?

ii. What is the effect of e-sourcing on performance of supermarket procurement function in Tanzanian context?

iii. What is the effect of e-payment on performance of supermarket procurement function in Tanzanian context?

iv. What is the effect of e-archiving on performance of supermarket procurement function in Tanzanian context?

1.6 Significance of the Study

The researcher believes that the study findings are of great benefit to the government, private entities and academicians.

1.6.1 The Government

The government of Tanzania with a huge identified system of procurement, that spend a lot of financial resources has a lot to learn from the study especially when you consider the emerging cases of unrealistic value chain and poor quality of supplied goods in various government organizations.

1.6.2 Private Entities

The study will help to enhance understanding and knowledge of electronic business practices in the Retail Industry in Tanzania. The findings, from CHOPPIES, TSN and VILLAGE supermarkets in Dar es Salaam can help other retail organization to identify gaps in their inventory management and procurement systems. Therefore by identifying areas of improvements, they can be able to put effort on ensuring that customers are provided with right product and service in the most efficient and effective way.

1.6.3 Academicians

This study will provide general understanding of electronic business practices in Tanzania context. Also the research work will provide procurement academicians with useful knowledge regarding how e-inventory management systems, e-sourcing, e-payment and e-archiving affect performance of procurement function in the retail industry hence help them to discover areas which they can research on it. This will also bridge the gap of knowledge between theories and practices on application of electronic business practices in Tanzania context.

1.7 Scope of the Study

The study focused on the effect of electronic business practices on the performance of supermarket procurement function in Tanzania using selected supermarkets in Dar es Salaam namely CHOPPIES, TSN and VILLAGE supermarkets. The studied electronic business practices were E-inventory management systems, e-sourcing, e-payment and e-archiving. These were examined to check how they affect performance of supermarket procurement function in term of costs, lead times and quality supplies.

1.8 Study Limitations

The major limitation for this study was poor response from respondents. Due to the nature of supermarket operations, workers were very busy to the extent that they had limited time with the researcher. The researcher applied different techniques to

overcome this, including arriving early at their work station and adopting dropping and picking strategy where he left questionnaires for them to fill when a bit free and pick them when dully filled.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with reviewed literatures, including journals, research reports, supermarket manuals and other literary works related to the topic under the study so as to understand what has been covered by other scholars and authors. It comprises of the introduction, theoretical literature review, empirical literature review, conceptual framework and research gap.

2.2 Theoretical Literature Review

This section covers conceptualization of key terms, e-business and procurement function and review of theories.

2.2.1 Conceptualization of Key Terms

2.2.1.1 E-business

E-business (electronic business) is the conduct of business processes on the internet. E-business process can include selling and buying products, services and supplies; customer servicing; payments processing; managing production control and collaborating with business partners. E-business is a bit broader than e-commerce, it goes beyond the simple buying and selling various products online. It comprises much wider range of business processes such as electronic order processing, supply chain management and customer relationship management (Naeem & Bashi, 2011). In the context of this study e-business has maintained the same meaning.

2.2.1.2 E-procurement

Sun *et al*, (2012) defines e-procurement as the digitalization of the purchasing activities, such as search, selection, communication, bidding or awarding of contracts. According to CIPS, (2009) e-procurement is all about using the internet to operate the transactional aspects of requisitioning, authorizing, ordering, receipting

and payment processes for the required services or products. In the context of this text e-procurement refers the same.

2.2.1.3 E-payment

It can be also called online payment system or electronic payment system. It is the way of doing transactions or paying for goods and services through an electronic means without the use of cash or check (Kenneth & Carol, 2014). The use of e-payment in this dissertation refers the same.

2.2.2 E-business and Procurement Function

Chaffey (2009) argues that e-business is intended to enhance the competitiveness of an organization by deploying innovative information and communications technology throughout an organization and beyond, through links to partners and customers. It involves using technology to automate existing processes, and renovation by applying technology. Organizations need to manage the change required by new processes and technology through what have traditionally been supporting activities such as human resources management. According to Chaffey (2009) cost/efficiency drivers (increasing speed with which supplies can be obtained, reduced sales and purchasing costs and reduced operating costs) are the most significant driver for adopting e-business in retail sector.

Baily, *et al* (2005) asserts that from the time when EDI system was introduced more than 20 years ago, e-business practices has matured and highly diversified, hence different applications with a variety of benefits. Some of the main benefits of e-business to procurement function were identified by different authors as shown in table 2.1

Table 2.1: E-business Benefits to Procurement Function

(David, 2009)	• Costs and lead times reduction • Facilitate effectiveness in budget control • Reducing errors and costs of ordering • Facilitate strategic purchasing • Reducing price of purchased products • Improve management of information
(Gunasekaran & Ngai, 2008)	• Sales Growth • Operational efficiency • Negotiable Transparency • Longer buyer-supplier relationships • Gain of competitive advantage
(Mibenge & Okoye, 2007)	• Transaction based benefits (computerized process i.e purchase to pay through payments cards) • Compliance based benefits (Reduction of maverick spending) • Information based benefits(Improved accounting quality) • Price benefits (sourcing strategically) • Payment benefits(Electronic payment of invoice)
(Joni, 2009)	• Facilitate centralized based purchasing • Ensure transparency in purchasing • Facilitate good budget control • Reduced manual work based mistakes
(Hatice & Mehmet, 2012)	• Facilitate reduced order cycle times • Simplified payments for purchases • Supplier bases expanded • Reduced paper work • Inventory reduction • Improved service and productivity • Save time • Reduce cost • Proper management of decentralized procurement • Improved integration with suppliers • Enhance planning and control • Improve effectiveness in purchasing process • Facilitate concentration on more strategic activities
(Chipiro ,2009)	• Reduced price of products • Enhance compliance of contracts • Procurement cycle time reduced • Costs of administration reduced • Facilitate visibility on demand of customers • Facilitate visibility on supply chain • Reduce costs of inventory and operations • Facilitate accuracy in production capacity • Improved decision making
(Aberdeen Group,2005)	• Reducing costs of transaction • Elimination of maverick buying • Saving costs of inventory • Enhance efficiency of processes • Increased compliance of contracts • Cycle times reduced

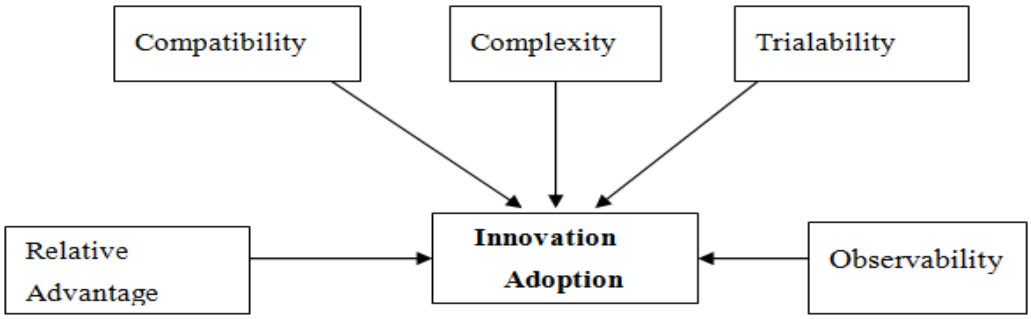
Source: Suleiman, 2015.

2.2.3 Review of Theories

2.2.3.1 Diffusion of Innovation Theory

Innovation diffusion theory was initiated by Schumpeter in the 20th century. Schumpeter studied the human imitation behavior between individuals (Ying-Li & Sui 2011). The diffusion innovation was popularized by Everret Rodgers in 1995 when he was investigating how innovation (technology) can diffuse focusing on the context of complexity, relative advantage, compatibility, observability and trialability. The theory is much concerned with the means or ways in which new technological idea, technique or artifact, or new use of an old one, diffuses into use. One of the arguments was that as time goes on, technological innovation spreads among members of social system through particular channels (Rogers, 2003). Figure 2.1 shows the variables which were a concern of Rodger. Originator

Figure 2.1 Innovation diffusion theory (IDT)



Source: Rogers, 2003.

Based on Rodger's works, it has been observed that Diffusion of innovation theory considers innovation diffusion as a universal process, which do not rely on specific type of innovation studied, who are the adopters and place or culture. It means that the process through which an innovation diffuses is universal to all fields that develop innovations (Kiggira, *et al.*, 2015). The relevance of this theory to the study is due to the fact that, it explains the need to diffuse e-business in the operations of the supermarkets such as inventory keeping, invoicing, payment and archiving/

recordkeeping. Adoption of e-business in supermarkets fits the context as it is more effective and efficient in managing and monitoring of various supermarkets operations such as activating and tracking all the supply chain operations at a single point of entry. The theory is therefore in line with this study based on the fact that the studied independent variables (e-inventory management systems, e-sourcing, e-payment and e-archiving/ recordkeeping) are innovations to be adopted for increased efficiency.

2.2.3.2 Transaction Cost Economics Theory

Transaction Cost Economics (TCE) theory developed from the idea that transactions form the center for economic thinking as analyzed by John R. Commons in 1931. According to Maunola (2009) (based on economics and related fields) transaction cost can be defined as cost incurred in making an economic exchange. Williamson (1989) suggested that there are various kinds of transactions costs: costs of searching information, costs of bargaining and costs of policy formulation and enforcement. The search of information costs includes costs that arise as the result of search for the best partner, supplier, customer and availability of goods on the market or price level (Tadelis and Williamson, 2012). Bargaining costs are costs which associated with establishment of the tamper-proof contract referring to the achievement of the appropriate agreement with other party (Tadelis and Williamson, 2012). The policy and enforcement costs are the costs that arise as a result of monitoring and enforcing the execution of the contract. The Transaction Cost Theory also conceptualizes the intra-organizational production as series of activities linked by transactions (David & Han, 2004).

According to Spraakman (2014), transactions are directed by market price. In the intra-organizational context, an activity is the partial production of a good or service, while a transaction is that stage in the activity series when one activity ends and another one begins. Thus, the hybrid or relation occurs when goods or services are transferred between divisions (David & Han, 2004). In inter-organizational relationships context, the transaction costs are generally defined as the costs of initiation, follow-up and enforcement of contracts. Maunola (2009) asserts that

transaction costs are normally arise from transaction of specific assets and uncertainty of internal and external environment. The theory is supported by the adoption of comprehensive interconnected network such as the electronic business practices platform to enhance automated transactions (Geyskens, Steenkamp & Kumar, 2006).

Supermarkets undertake a lot of transactions, in all operational fronts. From the supplier section to the buyers, the transactions are numerous which requires the backing of electronic business practices unit to enforce and keenly monitor all the transactions effectively (Kauffman & Mohtadi, 2004).

The relevance of theory to the study exists as it shows the role of e-business practices on managing the costs of operations through making it faster and easier to perform various activities regarding inventory keeping, invoicing, payment and archiving or recordkeeping. The use of e-business system makes it easier to manage various costs in transactions such as the costs of search and information and bargaining costs. It is easier to access information about the markets, place orders online, make invoices online and manage inventories thus managing extra transaction costs. The theory therefore supports all the independent variables (e-inventory management systems, e-sourcing, e-payment and e-archiving/recordkeeping).

2.3 Empirical Literature Review

Mwayongo and Omar (2017) conducted the study on e-inventory management effect on procurement processes. The study aimed at examining e-inventory management effect on procurement process of government corporations in Kenya. The the study findings revealed that e-inventory management practices has significant effect on logistics service delivery. Furthermore the study results revealed that government corporations have greatly invested in automation of procurement processes thus increasing competitive advantage. Generally the study results revealed that information technology in the procurement processes have reduced operational costs and increased turnaround time thus improved efficiency.

Another study was conducted by Buxmann et al (2014) on organizational uptake of Electronic platforms for enhancing supply chain performance in Uganda. The study revealed that there were few organizations engaged in the use of sophisticated structured software platforms to interconnect their supply chains. On the other hand, organizations that have already started to use electronic business practices platforms have benefited through cooperation improvements, supply chain redesigned and it's easier to quantify supplier evaluation and selection. The study also concluded that in order for the organization to successfully implement the use of electronic business practices software's there must be great and expensive alterations and customizations in the organization and thus organizations have to be strategic in utilizing these systems. The study suggested further research on the potential benefits and problems of using supply interconnection platforms like electronic business practices.

Gichane and Moronge (2018) conducted a study on the influence of electronic business practices on the performance of supermarket in Kenya. One among the objectives of the study was to assess the influence of E-inventory management systems on the performance of supermarkets. The study revealed that e-inventory management systems influence the performance of supermarkets. Large numbers of respondents highly agreed that the business had employed electronic inventory tracking systems to monitor stocks, electronic re- order points to generate purchase of a pre-determined amount of replenishment inventory and electronic stock taking to save time. The usage of auto-ID technologies improves accuracy in product marking. Electronic labeling system was also in use to enhance retrieval. Furthermore the business used electronic systems to conduct FIFO practices.

Geoffrey, *et al* (2016) conducted a study on e-sourcing and e-payment effects on public procurement performance in Kenya. The study aimed at determining the contribution of e-maintenance and e-sourcing on performance of county in Kenya. Kericho County was used as a case study whereas the study findings revealed that, e-sourcing had a positive contribution to the public procurement performance. The study also showed that e-maintenance had a positive effect on the performance of

public procurement performance. The study recommended that there is a need to execute e-sourcing at every procuring entity.

The study conducted by Kingori (2013) on determining e-procurement effect on supply chain management, intended to understand to what extent e-procurement is useful in teachers' service commission and also finding out the challenges arising as a result of e-procurement execution by the teachers' service commission. The findings from the study revealed that e-procurement has a positive relationship with supply chain management. Additionally the study showed that organizations benefit from online storage of data as it improves security and accessibility of information.

Munubi, *et al,*. (2017) conducted a study centered on understanding e-procurement effect on organizational performance in Kenya. The study had objectives aiming at determining e-sourcing and e-archiving effect on supermarkets performance. The study findings revealed that e-sourcing and e-archiving have a positive effect to the performance of supermarkets. Study respondents highly agreed that e-sourcing saves time as it facilitates supermarkets' interaction with suppliers and hence accessing pricelists and catalogue from suppliers. The study recommended that e-procurement must be adopted by all organization that strive to improve their performance

Makali (2015) conducted a study focused on understanding e-procurement effects on supermarket performance in Kenya. The results revealed that although the adoption of e-procurement in supermarkets is still low, the supermarket that have already adopted e-procurement have been able to increase cost efficiency by reducing wastage (e.g. use of many papers) and costs of finding suppliers. The study concluded that embracing e-procurement in supermarkets increase efficiency by enabling integration of departments and branches. In addition, e-procurement contributes greatly towards better communication between the different departments and branches thus helping to ensure operational efficiency and effectiveness. The most critical practices that contribute greatly to procurement performance in supermarkets are e-sourcing, e-requisitioning and e-tendering.

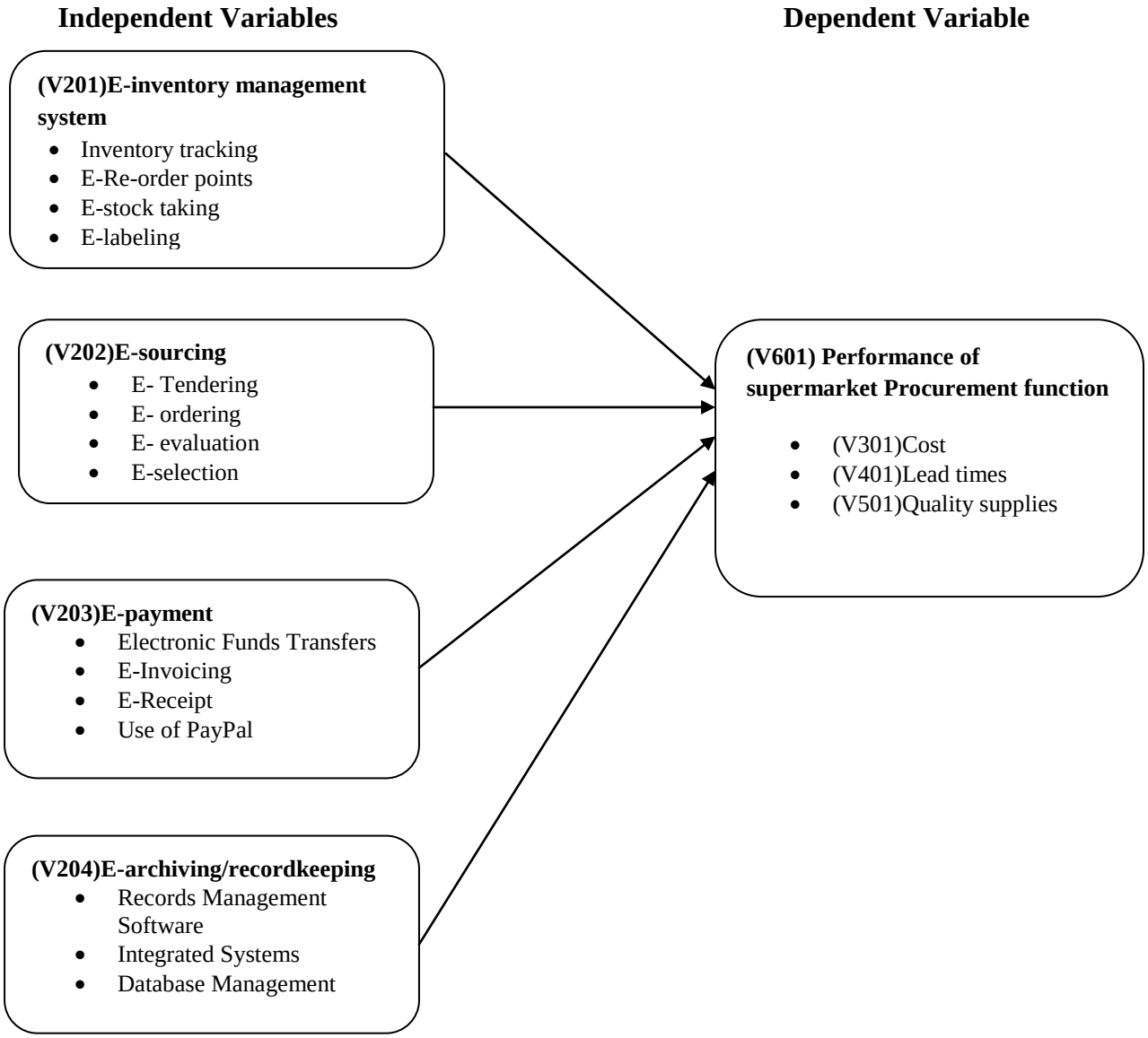
Manfreda and Groznik (2015) conducted the study in Slovenia, aiming at determining e-government and e-invoicing effect on business processes. Census survey was used to collect data from all registered businesses. The results revealed that businesses benefited through costs reduction as a result of expenses cut off by electronic systems. The results also showed that businesses experience higher returns as a result of e-invoicing incorporation in the ordering of commodities

Doherty *et al*,. (2013) conducted the study in their effort to understand the institutional responses on electronic procurement. The results revealed that organizations have been benefiting through usage of e-procurement technologies. Adoptions of e-invoicing to support payments and receipt issuing have reduced lead times in supply chain activities. In addition the study revealed that large numbers of institutions were planning to start executing e-award, e-catalogue and e-tendering systems.

2.4 Conceptual Framework

Figure 2.2 is the conceptual framework which shows the relationship between independent variables and dependent variable. There are various electronic technologies that have been used by different organizations to conduct their business. In this study, the researcher will be much concerned with Electronic inventory management system, Electronic sourcing, Electronic payment and Electronic archiving as independent variables and supermarket procurement performance as dependent variable. Figure 2.2 displays the variables.

Figure 2.2 Conceptual frame work



Source: Modified from (Gichane & Moronge, 2018)

2.4.1 Review of Variables

The section focuses on explanations of the independent and dependent variables considered in the study.

2.4.1.1 Electronic Inventory Management Systems

Electronic business systems provide a supportive role for human resource activities to improve organizational (or personal) effectiveness and efficiency (Blinn, Cohen,

Lorton & Stein, 2002). They help to accomplish activities quicker, support autonomous decision-making processes, and facilitate distributive operations so as to achieve higher logistics efficiency, (Cohen *et al,* 2002). According to Roy (2012), managing inventory through electronic means can play very important role in the reduction of overall cost of operations and supply chain of any business small or big. Han, (2014) observed that electronic inventory is used as a cushion against the supply and demand uncertainties. Through E-inventory management systems supermarkets can be able to improve customer needs forecasting therefore facilitating the procurement function to purchase the right kind and quantity of products at the right time. For Retail Company that is serious about better procurement function, improving inventory management system like record integrity is an ideal place to start (Wisner, 2012). In this study, electronic inventory systems comprise of inventory tracking, e-re-order points, e-stock taking and e-labeling. The researcher had the following hypothesis in mind;

H^1 *There is positive relationship between e-inventory management systems and performance of supermarket procurement function*

2.4.1.2 Electronic Sourcing

According to Bächle and Lehmann (2010), E-sourcing is referring to the use of web based technologies to improve supplier selection and qualification process as the strategic procurement aspect. E-sourcing involves the process of searching for suitable suppliers through the support of information technology (Muller and Bogaschewsky, 2008). In this study, electronic sourcing is defined as e- Tendering, e-ordering, e-evaluation and e-selection according to Maunola (2009). E-tendering can be used as a part of e-sourcing, e-tendering referring to requesting for prices and other information to suppliers and receiving the feedback through internet technology (McConnell, 2009). E-ordering can also be conducted after a successful souring. E-ordering is the process which involves transmission and acceptance of information regarding order requisitioning, order processing and order approval through the use of internet (Afande 2015). The automation of order process, make the process quicker and facilitate reduction of errors through clear control and audit

trail (Doherty *et al.,* 2013). Through e-sourcing procurement function can get the best suppliers around the world and hence enhanced performance because e-sourcing help to break geographic boundaries. E-sourcing help supermarkets to create good relationship with suppliers whose size or proximity might have been a barrier. The researcher had the following hypothesis in mind;

H^2 *There is positive relationship between e-sourcing and performance of supermarket procurement function*

2.4.1.3 Electronic Payment

Electronic payment refers to payment for services and goods that are done through paperless cash involving gadgets such as mobile devices by taking advantage of communication technologies such as wireless and mobile telecommunication networks (Apanasevic, 2013). Through electronic payment procurement function can ensure that suppliers are paid on time and hence good relationship with suppliers. E-payment save time, it is user-friendly and easier to control expenses. In this study, e-payment consists of electronic funds transfers, e-invoicing, e-receipting and use of PayPal according to Maunola (2009). E-invoicing refers to electronically transferring of invoicing information among business partners (Maunola, 2009). The researcher had the following hypothesis in mind;

H^3 *There is positive relationship between e-payment and performance of supermarket procurement function*

2.4.1.4 E-archiving/recordkeeping

Munubi, et al. (2017) asserts that, generally there are four phases in procurement process, which includes sourcing, tendering, payment and records maintenance. E-archiving is concerned with electronically keeping the vital and relevant information of suppliers and customer in their buyer, seller relationships. With e-archiving the procurement function can benefit from increased efficiency and file management, because it is easier to track important documents that have been stored electronically. Abailey (2016) asserts that e-archiving lower documentation costs, improved

timeliness, increase security and control of documents (such as contracts), facilitate collaboration (employee or manager could be able to recognize where a file is in the approval process at any given time). The researcher had the following hypothesis in mind;

H^4 *There is positive relationship between e-archiving and performance of supermarket procurement function*

2.4.1.5 Supermarket Procurement Performance

Procurement performance refers to how well procurement objectives are attained (Baily *et al*, 2005). The main procurement performance indicator is the extent to which the procurement function enables the organization to get best value for money spent on purchases and supplies (Musau, 2015). While traditionally, costs were the major measure of procurement performance, measuring procurement performance currently requires paying attention to more variables (PPOA, 2009). Procurement performance measurement, in modern organizations, involves going beyond costs to consider quality, supplier relations, inventory, risk and customer satisfaction (Shalle, *et al*., 2014). Value for money in the procurement procedures is determined by cost of procurement process, price of commodities, quality of goods or services procured and timeliness of procurement (Baily *et al*, 2005). While cost is an important measure of procurement efficiency, least cost without delivering quality goods make the procurement process ineffective (PPOA, 2009).

According to Shalle *et al.* (2014) procurement performance can be measured by focusing on "cost, quality, delivery, flexibility, and technology". This implies that procurement performance is dependent on how relationships with suppliers are managed to ensure availability of required quality and quantity of supplies in an organization at the right cost, at the right time (Shalle *et al.,* 2014). The main goal of procurement is to ensure required quality inputs are available in an organization in a timely and cost effective manner (PPOA, 2007). Procurement performance is thus about improving the manner in which procurement activities are done towards

delivering quality supplies in a timely and cost efficient way. In this study procurement performance is defined as Cost, Lead times and Quality supplies.

2.5 Research Gap

Reviewed literatures reveals several research gaps including lack of local studies conducted on supermarket procurement which there is noted increase of supermarkets in Tanzania. The increased innovations in electronic business practices and slow diffusion in developing countries due to ignorance and poverty reflected in terms of what is a priority, necessitates more studies in the area of electronic business practices for empirical evidences which in turn will stimulate adoption of electronic business practices.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introductions

This chapter deals with the explanations concerning the methods employed to carry out the study. The main sections of the chapter includes introduction, research design, area of study, target population, sample size, sampling procedure, data collection techniques, reliability and validity, data analysis and data presentation.

3.2 Research Design

Kothari (2004) describe a research design as conceptual structure through which a research is conducted. For this study the researcher decided to use a case study design whereas three supermarkets in Dar es Salaam were selected for investigation of the effects of electronic business practices on performance of supermarket procurement function.

The reason for adoption of case study design was due to the fact that the three selected supermarkets in Dar es Salaam had the required characteristics for provision of detailed information about the correlation between e-business and supermarket procurement function. The design is also flexible during the process of data collection, because it allows variety of data collection techniques and saves time and funds.

3.3 Area of Study

The study was conducted in Dar es Salaam specifically at three selected supermarkets (CHOPPIES, TSN and VILLAGE supermarkets. The basis for selecting these supermarkets was the active involvement in electronic business practices hence easier to obtain the required data. Dar es Salaam was selected because of its diversity and maturity in business functions especially supermarkets which are our target.

3.4 Target Population

The targeted population for this study comprised of Managers/Directors, Accountants, Procurement personnel, ICT personnel, Cashiers, Attendants and customers. The total population (of employees) was one hundred and twenty (120) from CHOPPIES, eighty four (84) from TSN and seventy seven (77) from VILLAGE supermarket. Customers number could not be established easily thus relying on customers who turned up during the study period at the respective supermarkets.

3.5 Sampling Procedures

The study employed both probability and non-probability sampling techniques whereby simple random, purposive and convenience sampling techniques were applied in obtaining the required sample size.

3.5.1 Purposive Sampling

This is also known as judgmental (Pallant, 2013). The technique was used to choose the informed respondents based on their position. It is a sampling technique whereby not every individual will have an equal chance of being selected. The researcher purposively selected managers, accountants, procurement personnel and IT personnel, because they were knowledgeable, reliable and directly involved in e-business and information worth for the study. Magigi (2015) argues that through non probability sampling procedure the researcher can have a range of option to select a study sample based on his subjective judgments.

3.5.2 Convenience Sampling

This is non-probability sampling whereby the respondents are selected based on accessibility (Kothari, 2004). Customers for respective supermarkets were selected through convenience sampling technique. While on supermarket premises the researcher contacted several customers who came to shop on the respective supermarkets and interviewed them. The technique was adopted because of the difficulties in identification and accessing supermarket customers.

3.5.3 Simple Random Sampling

Simple random sampling is technique of selecting individual from a large population to formulate a sample whereby each individual has equal chance of being selected (Kothari, 2004). The technique was used to select cashiers and attendants whereby every individual in the respective units had an equal chance of being selected. The researcher was provided with name lists of people in each unity from which he prepared small pieces of paper with their names to pick one randomly after each shake.

3.6 Sample Size

Sample size for this study was 75 respondents who comprised of supermarket Managers, procurement management unit, IT personnel, accountants, cashiers and attendants. Twenty nine (29) respondents were from CHOPPIES supermarket, twenty six (26) respondents from TSN supermarket and twenty (20) respondents were from VILLAGE supermarket. The sample size also involved fifteen (15) customers, five (5) from each respective supermarket.

3.7 Data Collection Techniques

Saunders, *et al.,* (2012) explained data collection as the process of finding detailed information to be used for drawing conclusion or getting solution regarding the existing study problem. Both primary and secondary data sources were used in this study. Primary data are those collected direct from the population, for the first time, often called original, while secondary data are information already in documents after collection and organization by someone else. Questionnaire and interview methods were used as key instruments for obtaining primary data, while documentary review was used to collect secondary data.

3.7.1.Questionnaires

Semi structured questionnaires were distributed to managers, cashiers, attendants, accounting officers and procurement officers. The researcher considered questionnaires as relevant tool because he was able to establish direct relationship

with respondents, who in turn were able to provide the needed information after explanation and clarification of the purpose of the study.

3.7.2 Interview

Face to face semi structured interview was used to collect information from Managers to supplement information collected through questionnaires. Interview was also used to collect data from customers of respective supermarkets. Through interview the researcher was able to control and make sure that asked questions were answered satisfactory.

3.7.3 Documentary Review

The researcher passed through various documents concerning the topic under study, including journals, books, manuals and internet source. Furthermore the researcher used some documents which were provided by supermarkets such as, Local purchase order, requisition to purchase, Goods received note and Delivery note, as secondary source. These sources assisted the researcher to rationalize some supportive measures to be included in the research report.

3.8 Reliability and Validity

Reliability and validity were considered important in ensuring reliable and valid findings.

3.8.1 Reliability

Refers to the capability of an instrument to measure consistently, in equivalent manner when applied in the same condition with the same subject (Sounders et al., 2009). In this study reliability was measured by considering the Cronbach's alpha coefficient. The general rule is that Cronbach's alpha above 0.7 is considered reliable and below 0.6 is considered not reliable. Table 3.1 presents the results.

Table 3.1 Reliability Statistics

Cronbach's Alpha	N of Items
.942	35

Source: Field Data, 2019.

Table 3.1 shows Cronbach's alpha of 0.942 which is above 0.7, indicating that data measured what was intended to measure each time.

3.8.2 Validity

This is the capability of the instrument to measure consistently the phenomenon it is designed to measure (Pallant, 2013). Researcher ensured validity by considering various comments received from supervisors and other experts. Furthermore by making sure that research objectives match with the results observed.

3.9 Data Analysis

The questionnaires were edited for completeness and consistency then coded for analysis through the help of Statistical Package for Social Science (SPSS) version 20. The obtained data were both qualitative and quantitative therefore the coded responses were analyzed using inferential analysis and content analysis. The general information about respondents was summarized using descriptive statistics. Likert scale questions were used to obtain respondents rating of e-business practices and their contribution to performance of supermarket procurement function. Data obtained through likert scale ratings were analyzed through generations of mean scores and standard deviations. The mean helps to show the general trend while the standard deviations were used to determine variance in the ratings of the respondents. Multiple regression analysis was used to test the relationship between electronic business practices and performance of supermarket procurement function. Data from open-ended questions and interviews were subjected to content analysis.

3.10 Data Presentation

To show a clear meaning of analyzed data, tables were used in presentation of the study findings. These helped the researcher to provide the results that are clear and understandable. Respondents' statements thought to be meaningful as far as the study was concerned were also presented followed by researcher's description on its implications in the light of the study objectives.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of study generated through analysis of data obtained from the field. Specifically the study intended to determine the effect of e-inventory management systems, establish the effect of e-sourcing, evaluate the effect of e-payment and assess the effect of e-archiving on performance of supermarket procurement function. The chapter is structured into three sections including introduction, respondents characteristics and the effect of electronic business practices on performance of supermarket procurement function.

4.2 Respondents Characteristics

This section focuses on the characteristics of the respondents such as gender, education level and experience level based on the assumptions that they were likely to have an effect on respondents responses.

4.2.1 Gender

Gender was considered important because respondents opinions on electronic business practices and performance of supermarket procurement function were collected from both male and female thus likely to differ based on positionality. Table 4.1 shows the distribution of respondents by gender.

Table 4.1 Gender of Respondents

Gender	Number	Percent
Male	43	57.3
Female	32	42.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.1 shows that 43 (57.3%) respondents were males while 32 (42.7%) respondents were females. The number of male respondents was a bit higher compared to the number of female respondents.

4.2.2 Education level

The researcher considered educational level of respondents important because it was likely to have an effect on provision of information regarding electronic business practices and performance of supermarket procurement function. Study respondents were asked to indicate their level of education. The findings were as shown in table 4.2

Table 4.2 Educational level

Education level	Number	Percent
Certificate/Diploma	20	26.7
Bachelor degree/Advanced diploma	47	62.7
Master degree	8	10.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.2 shows that 47 (62.7%) respondents held a bachelor degree or advanced diploma, whereas 20 (26.7%) respondents had either certificates or diplomas in various academic areas. The rest 8 (10.7%) respondents had masters degree.

4.2.3 Experience Level of Respondents

Experience level was considered important because respondents opinions on electronic business practices and performance of supermarket procurement function were collected from various employees thus likely to differ based on their work experience. Table 4.3 shows the distribution of respondents by work experience.

Table 4.3 Experience Level of Respondents

Experience level	Number	Percent
Less than 2 years	40	53.4
3-5 years	34	45.4
6-8 years	1	1.3
More than 9	-	-
Total	75	100.0

Source: Field Data, 2019

Table 4.3 shows that 40 (53.4) respondents had less than two years' experience, whereas 34 (45.4) respondents had 3-5 years' experience. The rest 1 (1.3) respondent had 6-8 years' experience.

4.3 The Effects of Electronic Business Practices (EBP) on Performance of Supermarket Procurement Function

The studied electronic business practices include e-inventory, e-sourcing, e-payment and e-archiving management systems. To determine the effects of electronic business practices on performance of supermarket procurement function, the researcher studied the adoption of electronic business practices by supermarkets and later its effect on performance of supermarket procurement function. The effects were checked by studying its effect on costs, lead times and quality supplies and finally by determining its effects through multiple regression analysis which displays the correlation between independent (e-inventory management systems, e-sourcing, e-payment and e-archiving) and dependent (performance of supermarket procurement function) variables.

4.3.1 Adoption of EBP by Supermarkets

Electronic business practices considered includes e-inventory, e-sourcing, e-payment and e-archiving management system. The study intended to establish the adoption level of each system (e-inventory, e-sourcing, e-payment and e-archiving). To check the adoption of each system, the researcher provided statements to the study respondents to choose the right answer based on what they know. Responses were in five point likert scale where 1= strongly disagree, 2= Disagree, 3= Neither Agree or Disagree, 4= Agree and 5 = strongly agree, aiming at showing the adoption level of each system. The findings for each system presented in mean scores can be clearly understood using the following key; *The mean score of 0 to 2.5 denotes that respondents did not agree upon the given statements, whereas 2.6 to 3.4 denotes that respondents moderately agreed upon the given statements. The mean score of 3.5 to 5.0 denotes that respondents highly agreed upon the given statements.*

4.3.1.1 Adoption of E-inventory Management Systems by Studied Supermarkets

When respondents were asked on adoption of e-inventory management systems namely inventory tracking system to monitor stocks, electronic re-order point to trigger purchase of a pre-determined amount of replenishment inventory, electronic stock taking to save time, electronic labeling system and electronic systems to establish FIFO practices their responses were as shown in table 4.4.

Table 4.4 Adoption of E-inventory Management Systems by Studied Supermarkets

E-inventory Management Systems	Mean score	Std. Deviation
Organization has adopted inventory tracking systems to monitor stocks	4.4533	.50117
Organization has set in place electronic re-order points to trigger purchase of a pre-determined amount of replenishment inventory	4.0267	1.15048
Organization has adopted electronic stock taking to save time	3.4133	.85572
There is adoption of electronic labeling system to enhance retrieval	3.9600	1.19050
Organization uses electronic systems to establish FIFO practices	3.1867	.94000

Source: Field Data, 2019.

Table 4.4 shows that respondents highly agreed that their organizations had adopted inventory tracking systems to monitor stocks evidenced by a mean score of 4.4533. With regard to electronic re-order points to trigger purchase of a pre-determined amount of replenishment inventory, the table shows a mean score of 4.0267 which denotes that respondents highly agreed that the system had been adopted. Furthermore the table shows that respondents highly agreed on adoption of electronic labeling system to enhance retrieval evidenced by a mean score of 3.9600. Respondents responses on adoption of electronic stock taking to save time and electronic systems to establish FIFO practices revealed that they moderately agreed as evidenced by a mean score of 3.4133 and 3.1867 respectively. This indicates that the studied supermarkets have adopted e-inventory management systems to improve performance of their procurement functions.

4.3.1.2 Adoption of E-sourcing by Studied Supermarkets

The considered components under e-sourcing includes electronic tender evaluation system, online identification of suppliers, electronic notification module in the procurement process, electronic ordering system and conduction of online electronic tendering. The respondents' responses for the mentioned aspects were as shown in table 4.5.

Table 4.5 Adoption of E-sourcing by Studied Supermarkets

E-sourcing	Mean Score	Std. Deviation
The company uses electronic tender evaluation system to evaluate its suppliers	4.3467	.81362
The company identifies its suppliers easily online	4.5467	.84299
The company uses electronic notification module during its procurement process	4.4533	.82680
The company uses electronic ordering systems to make orders	4.7867	.41242
Organization normally conducts online electronic tendering	4.4400	.84213

Source: Field Data, 2019.

Table 4.5 shows that respondents highly agreed that their company uses electronic tender evaluation system to evaluate its suppliers as evidenced by a mean score of 4.3467. With regard to the company identification of its suppliers easily online the table shows a mean score of 4.5467 which denotes that respondents highly agreed that suppliers are easily identified online. Furthermore respondents highly agreed that their company uses electronic notification module during its procurement process evidenced by a mean score of 4.4533. As far as company use of electronic ordering systems to make orders, study respondents highly agreed evidenced by a mean score of 4.7867. In respect of conducting of online electronic tendering, respondents highly agreed that their organization normally conducts online electronic tendering, evidenced by a mean score of 4.4400. This results implies that supermarkets have adopted e-sourcing to support its operation.

4.3.1.3 Adoption of E-payment by Studied Supermarkets

In establishing the adoption of e-payment, five aspects namely electronic payment when purchasing goods, electronic invoice processing, electronic payment modes

like funds transfers, online invoice preparation and electronic receipt systems were studied. Respondents responses on each presented in mean scores were as shown in table 4.6.

Table 4.6 Adoption of E-payment by Studied Supermarkets

E-payment	Mean Score	Std. Deviation
Organization payments are done through electronic means	4.1467	.74785
Organization transactions are carried through e-invoicing	4.1467	.74785
There is the use of electronic payments modes like funds transfers	4.2667	.79412
Invoices are prepared through online systems	4.1333	.99095
Organization uses electronic receipt systems	4.3467	.81362

Source: Field Data, 2019.

Table 4.6 shows that respondents highly agreed that organization payments are done through electronic means as evidenced by a mean score of 4.1467. With regard to carrying organization transactions through e-invoicing, the table shows a mean score of 4.1467 which denotes that respondents highly agreed on the use of electronic invoice to carry its transactions. Furthermore study respondents highly agreed that there is the use of electronic payments modes like funds transfers, evidenced by a mean score of 4.2667. Respondents highly agreed on the use of online invoice preparation systems for purchases, evidenced by a mean score of 4.1333. Lastly respondents highly agreed that their organization uses electronic receipt systems, evidenced by a mean score of 4.3467. The results implies that e-payment is highly adopted by the studied supermarkets.

4.3.1.4 Adoption of E-archiving by Studied Supermarkets

The considered components under e-archiving includes electronic systems to keep contract records, electronically retrieving of past procurement records, online contracts signing and management of sensitive data through data management software. The respondents' responses for the mentioned aspects were as shown in table 4.7.

Table 4.7 Adoption of E-archiving by Studied Supermarkets

E-archiving	Mean Score	Std. Deviation
Organization uses electronic systems to keep contract records	4.5600	.82593
Past procurement records are always retrieved through electronic systems	4.2400	.78568
Organization contracts are signed online	3.5867	1.07921
Organization manage sensitive data through data management software	4.7733	.42149

Source: Field Data, 2019.

Table 4.7 shows that respondents highly agreed that Organization uses electronic systems to keep contract records, evidenced by a mean score of 4.5600. Furthermore respondents highly agreed on retrieval of procurement records through electronic systems, evidenced by a mean score of 4.2400. With regard to organization contracts being signed online, the table shows a mean score of 3.5867 which denotes that respondents highly agreed that contracts are online signed. Furthermore study respondents highly agreed that their organization manage sensitive data through data management software, evidenced by mean a score of 4.7733. This indicates that studied supermarkets have adopted e-archiving to improve performance of their procurement functions.

4.3.2 The Effect of EBP on Performance of Supermarket Procurement Function Based on Costs, Lead times and Quality Supplies

Performance of supermarket procurement function has been tested using three variables which are costs, lead times and quality supplies. For the electronic business practice to be considered that it has an effect on the performance of supermarket procurement function it must reduce costs, lead times and increase quality of supplies. Based on the above argument, the researcher wanted to know if electronic business practices at the studied supermarkets have reduced costs, lead times and increased quality of supplies.

4.3.2.1 The Effect of EBP on Costs

To establish the effect of electronic business practices on costs, the researcher provided seven statements to the study respondents to choose what is the right answer. Responses were based on a five point Likert scale whereas 1= strongly disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree and 5 = strongly agree. Table 4.8 shows the study respondents responses, presented in a mean score categorized into three categories, 0 to 2.5 denoting that respondents did not agree upon the given statements, 2.6 to 3.4 denoting that respondents moderately agreed upon the given statements and 3.5 to 5.0 denoting that respondents highly agreed upon the given statements.

Table 4.8 The Effect of EBP on Costs

Statements on Costs Reduction	Mean Score	Std. Deviation
Reduction of corruption costs is experienced through the use of e-business practices	4.5600	.49973
Reduction of wastage costs is experienced through the use of e-business practices	4.7600	.42996
E-business practices has led to a lean procurement unit given less employees are required	4.0000	.65760
E-business practices has reduced transport and postage costs	4.5333	.50225
E-business practices provide cheaper mechanisms of interacting with suppliers	4.7600	.42996
Organization experienced significantly reduced failure costs through the use of e-business	4.4000	.85424
Sourcing costs has been reduced through the use of e-business practices	4.2933	.83461

Source: Field Data, 2019.

Table 4.8 shows that study respondents highly agreed that E-business practices has reduced corruption costs, evidenced by a mean score of 4.5600. In case of reduction of wastage costs, less employees requirement, reduction of transportation and postage costs, cheaper mechanism of interacting with suppliers, significant reduction of failure costs and reduced costs of sourcing, respondents highly agreed that costs have been reduced as evidenced by 4.7600, 4.0000, 4.5333, 4.7600, 4.4000 and 4.2933 mean scores respectively. Tables 4.9 to 4.15 provide detailed information regarding respondents' responses on cost reduction statements.

Table 4.9 EBP and Reduction of Corruption Related Costs

Responses	Frequency	Percent
Strongly disagree	-	-
Disagree	4	5.3
Neither agree nor Disagree	-	-
Agree	32	42.7
Strongly Agree	39	52.0
Total	75	100.0

Source: Field Data, 2019.

Table 4.9 shows that 94.7 percent (42.7% agree, 52% strongly agree) of respondents were informed that e-business has enhanced transparency and hence reduced corruption costs. Only 5.3 percent of the respondents which is insignificant fraction disagreed that electronic business practices reduced corruption costs.

Table 4.10 EBP and Reduction of Wastage Costs

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	-	-
Agree	16	21.3
Strongly Agree	55	73.3
Total	75	100.0

Source: Field Data, 2019.

Table 4.10 shows that 94.6 percent (21.3% agree, 73.3% strongly agree) of respondents were informed that electronic business practices has led to reduction in wastage costs. The rest 5.3 percent of respondents which is a small fraction, strongly disagreed on the statement that electronic business practices reduce wastage costs.

Table 4.11 EBP and Number of Employees at Procurement Function

Responses	Frequency	Percent
Strongly disagree	2	2.7
Disagree	2	2.7
Neither agree nor Disagree	15	20.0
Agree	41	54.7
Strongly Agree	15	20.0
Total	75	100.0

Source: Field Data, 2019.

Table 4.11 shows that 74.7 percent (54.7% agree, 20% strongly agree) of respondents were informed that electronic business practices has resulted into less employees requirement at the procurement function. Twenty percent (20%) neither agreed nor disagreed. Whereas the rest 5.4 percent (2.7% strongly disagree, 2.7 disagreed) were informed that electronic business practices do not lead into reduced employees at the procurement function.

Table 4.12 EBP and Reduction of Transport and Postage Costs

Responses	Frequency	Percent
Strongly disagree	2	2.7
Disagree	2	2.7
Neither agree nor Disagree	-	-
Agree	33	44.0
Strongly Agree	38	50.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.12 shows that 94.7 percent (44% agree, 50.7% strongly agree) of respondents were informed that electronic business practices has reduced transport and postage costs. Whereas the rest 5.4 percent (2.7% strongly disagree, 2.7 disagree) were informed that electronic business practices do not reduce transport and postage costs.

Table 4.13 EBP and Cheaper Mechanisms of Interacting with Suppliers

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	-	-
Agree	17	22.7
Strongly Agree	54	72.0
Total	75	100.0

Source: Field Data, 2019.

Table 4.13 shows that 94.7 percent (22.7% agree, 72% strongly agree) of the respondents were informed that electronic business practices provide cheaper mechanisms of interacting with suppliers. Whereas the rest 5.3 percent were informed that electronic business practices do not provide cheaper mechanisms of interacting with suppliers.

Table 4.14 EBP and Reduction of Failure Costs

Responses	Frequency	Percent
Strongly disagree	2	2.7
Disagree	2	2.7
Neither agree nor Disagree	16	21.3
Agree	8	10.7
Strongly Agree	47	62.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.14 shows that 73.4 percent (10.7% agree, 62.7% strongly agree) of respondents were informed that electronic business practices has reduced failure costs. Twenty one point three percent (21.3%) neither agreed nor disagreed. Whereas the rest 5.4 percent (2.7% strongly disagree, 2.7% disagree) of the study respondents were informed that electronic business practices do not reduce failure costs.

Table 4.15 EBP and Reduction of Sourcing Costs

Responses	Frequency	Percent
Strongly disagree	2	2.7
Disagree	2	2.7
Neither agree nor Disagree	16	21.3
Agree	16	21.3
Strongly Agree	39	52.0
Total	75	100.0

Source: Field Data, 2019.

Table 4.15 shows that 73.3 percent (21.3% agree, 52% strongly agree) of respondents were informed that electronic business practices has reduced costs of sourcing for suppliers. Twenty one point three percent (21.3%) neither agreed nor disagreed. Whereas the rests 5.4 percent (2.7% strongly disagree, 2.7% disagree) were informed that electronic business practices do not reduce costs of sourcing for suppliers.

Conclusively the finding implies that e-business practices have greatly contributed to the performance of supermarket procurement function as it has reduced costs.

4.3.2.2 The Effect of EBP on Lead Times

To determine the effect of electronic business practices on lead times, the researcher provided five statements to the study respondents to choose what is the right answer. Responses were based in a five point Likert scale whereas 1= strongly disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree and 5 = strongly agree. Table 4.16 shows the study respondents responses, presented in a mean score which is categorized into three categories, 0 to 2.5 denoting that respondents did not agree upon the given statements, 2.6 to 3.4 denoting that respondents moderately agreed upon the given statements and 3.5 to 5.0 denoting that respondents highly agreed upon the given statements.

Table 4.16 The Effect of EBP on Lead times

Statements on Lead times Reduction	Mean Score	Std. Deviation
Inventory management has been improved through the use of e-business practices	4.4400	.84213
Delivering delays by suppliers has been reduced by e-business practices	4.3200	.49756
E-business practices led to quickly handled emergency procurement	4.1200	.75265
Organization enjoys fast information sharing with supplier through e-business practices	4.6533	.50653
Lead times reduced through integration of processes by e-business practices	4.6533	.50653

Source: Field Data, 2019.

Table 4.16 shows that study respondents highly agreed that inventory management has been improved through the use of e-business practices, evidenced by a mean score of 4.4400. With regard to delivering delays by suppliers being reduced through e-business practices, the table shows a mean score of 4.3200 which denotes that respondents highly agreed that electronic business practices reduces delays. Respondents also highly agreed that e-business practices led to quickly handled emergency procurement, evidenced by a mean score of 4.1200. Furthermore study respondents highly agreed that organization enjoys fast information sharing with supplier through e-business practices, evidenced by a mean score of 4.6533 and also respondents highly agreed that lead times has been reduced through integration of process by e-business practices, evidenced by a mean score of 4.6533. Tables 4.17 to

4.21 provide detailed information regarding respondents' responses on lead times reduction statements.

Table 4.17 EBP and Enhanced Inventory Management Practices

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	16	21.3
Agree	7	9.3
Strongly Agree	48	64.0
Total	75	100.0

Source: Field Data, 2019.

Table 4.17 shows that 73.3 percent (9.3% agree, 64% strongly agree) of respondents were informed that electronic business practices has enhanced inventory management practices in their organization. Twenty one point three (21.3%) neither agreed nor disagreed. Whereas the rests 5.3 percent respondents were informed that electronic business practices has not enhanced inventory management practices.

Table 4.18 EBP and Reduction of Delays in Suppliers Delivering Goods

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	1	1.3
Agree	47	62.7
Strongly Agree	23	30.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.18 shows that 93.4 percent (62.7% agree, 30.7% strongly disagree) of respondents were informed that electronic business practices reduced delays in suppliers delivering goods. One point three percent (1.3%) neither agreed nor disagreed. Whereas the rests 5.3 percent were informed that electronic business practices has not reduced delays in suppliers delivering goods.

Table 4.19 EBP and Just in Time (JIT) Procurement

Responses	Frequency	Percent
Strongly disagree	2	2.7
Disagree	2	2.7
Neither agree nor Disagree	16	21.3
Agree	31	41.3
Strongly Agree	24	32.0
Total	75	100.0

Source: Field Data, 2019.

Table 4.19 shows that 73.3 percent (41.3% agree, 32% strongly agree) of respondents were informed that electronic business practices led to Just in Time (JIT) procurement thus emergence procurement is quickly handled. Twenty one point three (21.3 %) neither agreed nor disagreed. Whereas the rest 5.4 percent (2.7 strongly disagree, 2.7 disagree) were informed that electronic business practices has not led to Just in Time (JIT) procurement.

Table 4.20 EBP and Real Time Sharing of Information

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	1	1.3
Agree	23	30.7
Strongly Agree	47	62.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.20 shows that 93.4% (30.7% agree, 62.7% strongly agree) were informed that electronic business practices has real time sharing of information between organization and suppliers. One point three percent (1.3%) neither agreed nor disagreed, whereas the rests 5.3% respondents were informed that electronic business practices has no real time sharing of information.

Table 4.21 EBP and Integration of Processes

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	1	1.3
Agree	23	30.7
Strongly Agree	47	62.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.21 shows that 93.4 percent (30.7% agree, 62.7% strongly agree) of respondents were informed that electronic business practices has led to integration of processes which has reduced lead times. One point three percent (1.3%) neither agreed nor disagreed, whereas the rests 5.3 percent of the study respondents were informed that electronic business practices has not led to integration of processes.

Conclusively the finding indicates that electronic business practices have greatly contributed to the performance of supermarket procurement function as it plays great extent in reducing lead times.

4.3.2.3 The Effect of EBP on Quality of supplies

To establish the effect of electronic business practices on quality of supplies, the researcher provided four statements to the study respondents to choose what is the right answer. Responses were based on a five point Likert scale where 1= strongly disagree, 2= Disagree, 3= Neither Agree or Disagree, 4= Agree and 5 = strongly agree. Table 4.22 shows the study respondents responses, presented in a mean score which is categorized into three categories, 0 to 2.5 denoting that respondents did not agreed upon the given statements, 2.6 to 3.4 denoting that respondents moderately agreed upon the given statements and 3.5 to 5.0 denoting that respondents highly agreed upon the given statements.

Table 4.22 The Effect of EBP on Quality of Supplies

Statements on Quality of Supplies	Mean score	Std. Deviation
Our Customers enjoy quality products consistently	4.4533	.50117
Organization succeed to reduce customer complaints by higher percentage through e-business	4.1200	.73448
There is reduction of complains about procurement process in the organization	4.1333	.87508
Organization enjoying huge increase of customers	4.2400	.78568

Source: Field Data, 2019.

Table 4.22 shows that, the study respondents highly agreed that customers enjoy quality products consistently, evidenced by a mean score of 4.4533. In respect of reduction of customer complaints, reduction of complaints about procurement process and organization enjoying huge increase of customers, respondents highly agreed that quality of supplies have been increased as evidenced by 4.1200, 4.1333 and 4.2400 mean scores respectively. Tables 4.23 to 4.26 provide detailed information regarding respondents' responses on quality of supplies.

Table 4.23 EBP and Quality of Products

Responses	Frequency	Percent
Strongly disagree	-	-
Disagree	4	5.3
Neither agree nor Disagree	-	-
Agree	40	53.3
Strongly Agree	31	41.3
Total	75	100.0

Source: Field Data, 2019.

Table 4.23 shows that 94.6 percent (53.3% agree, 41.3% strongly agree) of respondents were informed that electronic business practices has led to customers consistently get quality products. Whereas the rest 5.3 percent of the study respondents were informed that electronic business practices has not increased quality of products.

Table 4.24 EBP and Reduction of Customer Complaints

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	15	20.0
Agree	33	44.0
Strongly Agree	23	30.7
Total	75	100.0

Source: Field Data, 2019.

Table 4.24 shows that 74.7 percent (44% agree, 30.7% strongly agree) of respondents were informed that electronic business practices has reduced customer complaints. Twenty percent (20%) neither agreed nor disagreed, whereas the rests 5.3 percent were informed that electronic business practices has not reduced customer complaints.

Table 4.25 EBP and Reduction of Complains about Procurement Process

Responses	Frequency	Percent
Strongly disagree	4	5.3
Disagree	-	-
Neither agree nor Disagree	24	32.0
Agree	16	21.3
Strongly Agree	31	41.3
Total	75	100.0

Source: Field Data, 2019.

Table 4.25 shows that 62.6 percent (21.3% agree, 41.3% strongly agree) of the study respondents were informed that electronic business practices has reduced complains about procurement process. Thirty two percent (32%) neither agreed nor disagreed. Whereas the rests 5.3 percent of respondents were informed that electronic business practices has not reduced complains about procurement process.

Table 4.26 EBP and Increase of Customers

Responses	Frequency	Percent
Strongly disagree	2	2.7
Disagree	2	2.7
Neither agree nor Disagree	15	20.0
Agree	25	33.3
Strongly Agree	31	41.3
Total	75	100.0

Source: Field Data, 2019.

Table 4.26 shows that 74.6 percent (33.3% agree, 41.3% strongly agree) of the study respondents were informed that electronic business practices has led to organization enjoying huge increase of customers. Twenty percent (20%) neither agreed nor disagreed, whereas the rests 5.4 percent of respondents were informed that electronic business practices has not increased number of customers.

Conclusively the finding indicates that electronic business practices contributed to the performance of supermarket procurement function through increasing the quality of supplies.

4.3.3 The Effect of EBP on Performance of Supermarket Procurement Function Tested Through Correlations of Variables Using Multiple regression

The study had an assumption that there is a relationship between electronic business practices and performance of supermarket procurement function. Multiple regression analysis was used to provide a model that can explain the existing relationship between variables. The regression model used was as follows;

$$\mathbf{Y=a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e}$$

Where:

Y= Performance of supermarket Procurement function;

a and *b* = regression constants,

a= the Y intercept when x is zero;

b1, b2, b3, and b4 = regression weights attached to the variables;

X_1 =e-inventory management systems;

X_2 = e-sourcing;

X_3 =e-payment;

X_4=e-archiving,

e = error term**.**

4.3.3.1 Evaluating the Model

The researcher sought to understand the extent of influence of independent variables (e-inventory management systems, e-sourcing, e-payment and e-archiving) on the dependent variable (performance of supermarket procurement function). The "R Square" is a measure of how much the variance in the dependent variable is explained by the model. Table 4.27 summarizes the results.

Table 4.27 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.943[a]	.889	.883	1.99530

a. Predictors: (Constant), E-archiving, E-inventory management systems, E-sourcing, E-payment

Source: Field Data, 2019.

Table 4.27 shows that the "R Square" value is 0.889, which means that the extent of influence of independent variables (e-inventory management system, e-sourcing, e-payment and e-archiving) on the dependent variable (performance of supermarket procurement function) is 88.9%. Such a percentage indicates a high level of prediction, that 88.9% of the variations in performance of supermarket procurement function could be explained by the changes in e-inventory management systems, e-sourcing, e-payment and e-archiving. The 11.1% unexplained percent goes for other factors. Based on the findings it can be argued that the effect of electronic business practices on performance of supermarket procurement function is great.

4.3.3.2 Analysis of Variance (ANOVA) Test

To understand overall significance of independent variables in predicting dependent variable, the ANOVA test was performed and the results were as shown in table 4.28.

Table 4.28 ANOVA Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2239.795	4	559.949	140.648	.000[b]
	Residual	278.685	70	3.981		
	Total	2518.480	74			

a. Dependent Variable: Performance of supermarket procurement function
b. Predictors: (Constant), E-archiving, E-inventory management systems, E-sourcing, E-payment
Source: Field Data, 2019.

Table 4.28 shows that in overall the independent variables (e-inventory management systems, e-sourcing, e-payment and e-archiving) are significant in predicting the dependent variable (performance of supermarket procurement function). This is evidenced by sig 0.000 P-value which is less than 0.05.

4.3.3.3 Regression Coefficients

To establish the significance of each independent variable (e-inventory management system, e-sourcing, e-payment and e-archiving) the regression coefficients were determined. The information displayed in table 4.29 was the result of the multiple regression analysis. The table basically shows all the independent variables and their influence to the dependent variable in terms of significance, direction and strength of the relationship between the respective variables.

Table 4.29 Coefficients

Model		Coefficients		t-value	Significance level.
		β	Std. Error		
1	(Constant)	31.024	2.822	10.993	.000
	E-inventory management systems	.789	.091	8.675	.000
	E-sourcing	1.108	.156	7.120	.000
	E-payment	-.225	.085	-2.631	.010
	E-archiving	.553	.143	3.864	.000

a. Dependent Variable: Performance of supermarket procurement function

Source: Field Data, 2019.

The coefficient in table 4.29 has proven that taking all independent variables (E-inventory management systems, e-sourcing, e-payment and e-archiving) constant at zero, performance of supermarket procurement function would have been 31.024. The results presented also shows that taking all other independent variables constant at zero, a unit increase in e-inventory management systems led to a 0.789 increase in the scores of performance of supermarket procurement function, whereas a unit increase in e-sourcing led to a 1.108 increase in performance of supermarket procurement function. In case of a unit increase in e-payment the table shows that it led to a -0.225 decrease in the scores of performance of supermarket procurement function while with regard to a unit increase in e-archiving, results show that it led to 0.553 increases in the score of performance of supermarket procurement function. The findings imply that e-inventory management systems, e-sourcing and e-archiving had a positive relationship (effect) with performance of supermarket procurement function while e-payment had a negative relationship (effect) with performance of supermarket procurement function. Based on this results the general form of the equation to predict performance of supermarket procurement function in relation to electronic business practices is as follows; Performance of supermarket procurement function =31.024 + 0.789 E-inventory management systems + 1.108 E-sourcing – 0.225 E-payment + 0.553 E-archiving.

Furthermore, the corresponding p-value presented in table 4.29 shows that, the relationship between e-inventory management systems and performance of supermarket procurement function is statistically significant evidenced by a P-value which is less than 5% (p-value 0.000). In respect of e-sourcing, e-payment and e-archiving the results shows that they had a significant relationship with performance of supermarket procurement function because their p-value was also less than 5% (p-value 0.000, 0.010 and 0.000 respectively). The findings imply that electronic business practices (e-inventory management system, e-sourcing, e-payment and e-archiving) have a significant contribution on the performance of supermarket procurement function.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

In this chapter the research findings presented in chapter four are discussed based on adoption of electronic business practices (e-inventory management system, e-sourcing, e-payment and e-archiving) and its effect on performance of supermarket procurement function tested first by costs, lead times and quality supplies and then tested through multiple regression analysis to see the correlation between independent (e-inventory management systems, e-sourcing, e-payment and e-archiving) and dependent (performance of supermarket procurement function) variables. The chapter is structured into two main sections including introduction and the effect of electronic business practices on performance of supermarket procurement function.

5.2 The Effect of EBP on Performance of Supermarket Procurement Function

For effective evaluation of the effect of electronic business practices on performance of supermarket procurement function, the researcher studied adoption of electronic business practices by selected supermarkets and later its effect on supermarket procurement performance through checking its effect on costs, lead time and quality supplies. Then finally determining its effect through multiple regression analysis which shows the correlation between independent and dependent variables.

5.2.1 Adoption of EBP by Studied Supermarkets

The findings presented in section 4.3.1 of chapter four shows that adoption of electronic business practices by studied supermarkets were as follows

5.2.1.1 Adoption of E-inventory Management Systems by Supermarkets

The findings of this study show that the study respondents highly agreed that their supermarkets execute e-inventory management practices, as shown in table 4.4. In

consideration of the findings including the statement below made by one of the study respondents during interview;

> *"… You can see here every product has been attached with a barcode and this made it easier to track the flow of product and to conduct stock taking automatically… it's easy to automatically track which products arrived earlier than others hence FIFO can be maintained…"*

It can be argued that some of the Tanzanian supermarkets have advanced in executing e-inventory management systems. As asserted by Smith (2012) it can further be argued that operational efficiency in Tanzanian business can be achieved as experienced by developed countries through adoption of e-inventory management system.

5.2.1.2 Adoption of E-sourcing by Supermarkets

The findings in table 4.5 (chapter four) shows that study respondents highly agreed that e-sourcing has been adopted in their supermarkets. Moreover through interview the statements below made by study respondents support the findings;

> *"…It is easier to communicate with suppliers through their website and emails… no need to go and search for several quotations because all that can be sent via emails…there is reduction of postage cost, paper used… I can say e-sourcing is of importance to the performance of procurement function…"*

> *"…now we are receiving products direct from abroad and this has been facilitated through online sourcing which you call it e-sourcing… e-sourcing has benefit us in a such way…"*

From the findings it can be argued that Tanzanian supermarkets have started using e-sourcing in their procurement activities. Capitalizing on Doherty *et al*., (2013) it can further be argued that Tanzanian supermarkets are likely to enjoy the benefits of applying e-sourcing in their business activities which includes reduction of lead times and sourcing costs.

5.2.1.3 Adoption of E-payment by Supermarkets

The findings in table 4.6 (chapter four) shows that study respondents highly agreed that studied supermarkets have already executed e-payment systems. The findings were strengthened by some of the study respondents statements made during interview sessions shown below;

> *"…transferring funds electronically to supplier make it easier to complete payments...through e-payment suppliers are paid on time, as a result there is a good relationship between suppliers and procurement function…" (Interview transcript, 2019)*
>
> "*… Electronic receipt have really reduce amount of paper used in the business… I can conclude that these e-business practices have reduced costs to a great extent…" (Interview transcript, 2019)*

Based on the findings it can be argued that Tanzanian supermarkets have adopted e-payment in their procurement activities. These findings are in line with Gichane and Moronge (2018) assertion that East African Countries have started to embark on e-payment systems such as electronic funds transfer, mobile payment and electronic receipt.

5.2.1.4 Adoption of E-archiving by Supermarkets

The findings in table 4.7 (chapter four) shows that the study respondents highly agreed that e-archiving was practiced by the studied supermarkets. The findings was further supported by respondents' statements during interview sessions, evidenced by the statements below;

> *"…Nowadays it's easier to track previous procurement records and comparing various trends on suppliers' prices... This make it possible to choose suppliers wisely as compared to the time when records were manually kept…" (Interview transcript, 2019)*
>
> *"…look here I can easily find the contract records of any of our suppliers by just a single click… (Interview transcript, 2019*

Based on the findings it can be argued that some Tanzanian supermarkets have adopted e-archiving. Moreover the findings are also in line with Makali (2015)

assertion that e-archiving is now practiced in many developed countries, including data management software and electronic retrieving of documents.

5.2.2 The Effect of EBP on Performance of Supermarket Procurement Function Based on Costs, Lead times and Quality Supplies

For the electronic business practice to be considered that it has an effect on the performance of supermarket procurement function it must reduce costs, lead times and increase quality of supplies. Based on the above argument, the researcher wanted to know if electronic business practices has reduced costs, lead times and increased quality of supplies.

5.2.2.1 The Effect of EBP on Costs

To establish the effect of electronic business practices on costs, the researcher provided seven statements to the study respondents to choose what is the right answer regarding electronic business practices and its effect on costs reduction. The findings presented in table 4.8 (chapter four) showed that respondents highly agreed that electronic business practices has reduced costs. The finding was supported by the statement made by one of the study respondents shown below;

> *"…actually we don't need to go and find the quotations everything is done while sitting in my computer… transportation and postage costs have been really reduced through these technologies…" (Interview transcript, 2019).*

This findings are in line with Roy (2012) assertion that managing inventory through electronic means can play very important role in the reduction of overall cost of operations and supply chain of any business small or big.

5.2.2.2 The Effect of EBP on Lead Times

To determine the effect of electronic business practices on lead times, the researcher provided five statements to the study respondents to choose what is the right answer regarding electronic business practices and its effect on lead times reduction. The findings presented in table 4.16 (chapter four) showed that respondents highly agreed

that electronic business practices has reduced lead times. The findings are in line with Doherty *et al*., (2013) assertion that through electronic business practices, procurement function can reduce lead times by getting best suppliers around the world.

5.2.2.3 The Effect of EBP on Quality of supplies

To establish the effect of electronic business practices on quality of supplies, the researcher provided four statements to the study respondents to choose what is the right answer regarding electronic business practices and its effect on quality of supplies. The findings in table 4.22 (chapter four) showed that respondents highly agreed that electronic business practices has increased quality of supplies. The finding was backed up by the statement made by one of the study respondents written below;

> "*…I have been buying here for like two years now and this is because I normally get what I want in this supermarket…" (Interview transcript, 2019).*

These findings are in line with Shalle *et al.* (2014) who asserts that electronic business practices not only reduce costs but also increase the quality of supplies.

5.2.3 The Effect of EBP on Performance of Supermarket Procurement Function Tested through Correlations of Variables Using Multiple regression

The study had an assumption that there is a relationship between electronic business practices and performance of supermarket procurement function. Multiple regression analysis was used to determine the existing relationship between the independent and dependent variables.

The finding presented in table 4.27 (chapter four) shows that, the "R Square" value is 0.889, which means that the influence of independent variables (e-inventory management system, e-sourcing, e-payment and e-archiving) on the dependent variable (performance of supermarket procurement function) is 88.9%. This percentage is high to justify the use of electronic business practices in consideration that there are other factors (Omondi & Namusonge, 2015). The other best practices

contributing to good performance of procurement function recognized by Omondi and Namusonge (2015) are cost control, hiring of trained personnel, proactive approach in management and customer orientation.

The findings presented in table 4.29 (chapter four) shows a significance effect of each independent variable (e-inventory management system, e-sourcing, e-payment and e-archiving) on dependent variable (performance of supermarket procurement function).

5.2.3.1 E-inventory Management Systems and Performance of Supermarket Procurement Function

Referring to the findings in table 4.29 (chapter four), e-inventory management systems has a significant (p-value<0.000) and positive (β=0.789) relationship with performance of supermarket procurement function. These findings are in line with those obtained by Mwayongo and Omar (2017) which asserts that e-inventory management system has significant and positive effect to the performance of procurement function. The major arguments supporting the role of e-inventory management system is that, e-inventory management is influential for procurement process and a company's survival. If a company does not adopt a global procurement strategy while its competitors have adopted it, in the long run the company will fail to withstand the competition from competent competitors.

5.2.3.2 E-sourcing and Performance of Supermarket Procurement Function

Table 4.29 in chapter four shows that e-sourcing has a significant (p-value<0.000) positive (β=1.108) relationship with performance of supermarket procurement function. These findings are in line with those obtained by Makali (2015) which revealed that e-sourcing has significant contribution on the performance of supermarket procurement function. The major arguments supporting the role of e-sourcing on performance of procurement function is that e-sourcing is important as it redefines supplier management and relationships. E-sourcing and e-tendering platforms are good as from such platforms, suppliers can send information requests and receive feedback that supports tender bid preparation processes. Based on

findings it can be argued that e-sourcing is a necessary tool for the effectiveness of supermarket procurement function.

5.2.3.3 E-payment and Performance of Supermarket Procurement Function

Table 4.29 in chapter four shows that e-payment has a negative (β= –0.225) significant (p-value<0.010) relationship with performance of supermarket procurement function. This is to say that an increase on e-payment will lead to decrease on the performance of supermarket procurement function. These findings are contrary with the findings by Gichane and Moronge (2018) which concluded that e-payment has significant positive relationship with the performance of supermarket procurement. The difference in findings may be due to the low level of understanding of respondents regarding e-payment practices.

5.2.3.4 E-archiving and Performance of Supermarket Procurement Function

Table 4.29 in chapter four shows that e-archiving has a significant (p-value<0.000) positive (β=0.553) relationship with performance of supermarket procurement function. These findings are similar to Munubi., et al (2017) who found that performance of supermarket procurement is greatly influenced positively by e-archiving. Contract records and other important documents regarding procurement when electronically stored, enables easy comparison between the performance of previous contracts and ongoing contracts.

CHAPTER SIX

SUMMARY, CONCLUSION, RECOMMENDATIONS AND POLICY IMPLICATIONS

6.1 Introduction

This chapter provides summary of the findings, conclusion and recommendations. The chapter is structured into six parts including introduction, summary of findings, conclusion, policy implication, study recommendations and area for further research study. The conclusions and recommendations made under this chapter are based on the study findings and literature review.

6.2 Summary of Findings

This research aimed to find out the contribution of electronic business practices on the performance of supermarket procurement function. The specific objectives of this study were to determine the effect of e-inventory management systems on performance of supermarket procurement function, to establish the effect of e-sourcing on performance of supermarket procurement function, to evaluate the effect of e-payment on performance of supermarket procurement function and to assess the effect of e-archiving on performance of supermarket procurement function.

6.2.1 The Effect of E-inventory Management Systems on Performance of Supermarket Procurement Function

Results acquired through questionnaires presented to the respondents in both organizations indicated that, there is a noted positive effect of e-inventory management systems on performance of supermarket procurement function. E-inventory management systems contribute in reducing costs and lead times while increasing quality of supplies.

6.2.2 The Effect of E-sourcing on Performance of Supermarket Procurement Function

The findings revealed that, there is a noted positive effect of e-sourcing on performance of supermarket procurement function. E-sourcing contribute in reducing costs and lead times while increasing quality of supplies.

6.2.3 The Effect of E-payment on Performance of Supermarket Procurement Function

Results indicates that, there a negative effect between e-payment and performance of supermarket procurement function, regardless that it plays an important role in reducing costs and lead times. This needs further investigation since it is contrary to the findings by Gichane and Moronge (2018).

6.2.4 The Effect of E-archiving on Performance of Supermarket Procurement Function

Results shows that, there is a noted positive effect of e-archiving on performance of supermarket procurement function. E-archiving contribute in reducing costs and lead times while increasing quality of supplies.

6.3 Conclusion

Regardless of many obstacles and limitations the study serves the role of an important pilot in the assessment for contribution of electronic business practices on the performance of supermarket procurement function in Tanzania. The researcher was having four hypothesis in mind including; there is a positive relationship between e-inventory management systems and performance of supermarket procurement function, there is positive relationship between e-sourcing and performance of supermarket procurement function, there is a positive relationship between e-payment and performance of supermarket procurement function and there is a positive relationship between e-archiving and performance of supermarket procurement function.

The major contribution of this study is establishment of e-inventory management systems, e-sourcing and e-archiving contribution on the performance of supermarket procurement function. Generally the study revealed that the studied supermarket procurement units were benefiting from the application of electronic business practices in their daily operations. The researcher observed that there is still much more that can be done with the use of technology to enhance the performance of procurement function in various organization.

6.4 Policy Implication

The study findings have policy implications to both public and private organizations. Additionally the findings act as a base for the government to enhance effective application of ICT in procurement activities because if the system is executed well, it provides many benefits to the Government. Such benefit includes reduction of corruption by making procurement proceeding open and offers an opportunity to work with different suppliers in the world. A need for policy that guides adoption and use of electronic business practices arises based on the findings.

6.5 Study Recommendations

Recommendations made are established from the findings and literature review. The study recommends the following;

6.5.1 Recommendation to the Government

The government of Tanzania should insist on application of electronic systems in procurement activities throughout public institutions in order to achieve the advantages which the private organizations obtain in adopting electronic systems, supported by Mushi (2018) argument that the application of electronic systems on government procurement is still on preliminary stages.

Despite the fact that PPA and PPRA have addressed the issue of e-procurement in procuring entities and provide the set procedures for conducting the same accordingly, more can be done to put more emphasize on the issue of e-procurement through inaction of laws and regulations that will enable to take measure against

procurement practioners whom do not implement e-procurement intentionally for personal gains or merely reluctance. Furthermore PPRA as the authority that oversees the implementation of procurement activities should conduct more procurement audits that focused on assessing the e-procurement use within the procuring entities.

6.5.2 Recommendation to Organizations

The study suggested continuation of electronic systems usage, to provide a supportive role for human resource activities for improved organization effectiveness and efficiency. Gichane and Moronge (2018) asserts that, electronic business systems assists in completing activities faster, enhance distributive operations, improve decision making and reducing the overall operation costs.

6.5.3 Recommendation to Academicians

Academicians should proceed with research on application of electronic systems in procurement activities so as to influence the government and private organizations on putting more emphasize on e-procurement adoption responsiveness to ensure efficiency and effectiveness in all operations.

6.6 Area for Further study

This study was conducted to explore the contribution of electronic business practices on the performance of supermarket procurement function a case of selected supermarkets in Dar-es-Salaam. Further study may be conducted on Determinants of procurement performance by comparing public and private organization.

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APPENDICES

QUESTIONNAIRE

Dear Respondent

This questionnaire is part of a research project to realize the contribution of e-business practices on supermarket procurement performance in Tanzania. Your organization has been selected because of its active involvement in e-business. Your responses are therefore important in helping the researcher to prepare an academic research report.

I humbly request your participation in this academic activity through completing the questionnaire. The information you provide will be treated in strict confidence and that your name will remain anonymous during and after this data collection exercise.

Thanking you for cooperation and valued responses.

GENERAL ORGANIZATION INFORMATION (100)

This part carry questions which will be used for classification purpose only. The required information will be kept strictly confidential and not used in any other way. Please fill in the space provided or circle the most appropriate answer.

(100a) Name of your organization _____

(100 b)What Position do you hold in the organization?_____

(100 c) For How Long have you been employed in that position?

_____

(100d) Indicate your highest education level?

a) Primary school
b) Secondary/High school
c) Certificate/Diploma
d) Bachelor Degree/Advanced Diploma
e) Masters Degree
f) Other level (specify) _____

(100f)What type of organization is the firm?

g) Sole Proprietorship
h) Partnership
i) Company
j) Other (please specify)_____

(100g) Indicate your gender?

a) Male
b) Female

Part II: E-business practices Adoption

Specify your level of agreement by circling the number which best describes your opinion.

(201) E-inventory management systems	**Strongly Agree**	**Agree**	**Neither agree or Disagree**	**Disagree**	**Strongly Disagree**
(201a) Organization has adopted inventory tracking systems to monitor stocks	1	2	3	4	5
(201b) Organization has set in place electronic re-order points to trigger purchase of a pre-determined amount of replenishment inventory	1	2	3	4	5
(201c) Organization has adopted electronic stock taking to save time	1	2	3	4	5
(201d)There is adoption of electronic labeling system to enhance retrieval	1	2	3	4	5
(201e) Organization uses electronic systems to establish FIFO practices	1	2	3	4	5
(202)E-sourcing					
(202a) The company uses electronic tender evaluation system to evaluate its suppliers	1	2	3	4	5
(202b)Suppliers are easily identified through online systems	1	2	3	4	5
(202c) The company uses electronic notification module during its procurement process	1	2	3	4	5
(202d) The company uses electronic ordering systems to make orders	1	2	3	4	5
(202e) Organization normally conducts online electronic tendering	1	2	3	4	5

(203) E-payment					
(203a) Organization payments are done through electronic payment	1	2	3	4	5
(203b) Organization transactions are carried through e-invoicing	1	2	3	4	5
(203c) There is the use of electronic payments modes like funds transfers	1	2	3	4	5
(203d) Organization has online invoice preparation systems for purchases	1	2	3	4	5
(203e) Organization uses electronic receipt systems	1	2	3	4	5
(**204) E-archiving**					
(204a)Organization uses electronic systems to keep contract records	1	2	3	4	5
(204b)Past procurement records are always retrieved through electronic systems	1	2	3	4	5
(204c) Organization contracts are signed online	1	2	3	4	5
(204d) Organization manage sensitive data through Data management software	1	2	3	4	5

Part III: E-business practices and Costs (301)

(301a) Reduction of corruption costs is experienced through the use of e-business practices	1	2	3	4	5
(301b) Reduction of wastage costs is experienced through the use of e-business practices	1	2	3	4	5
(301c) E-business practices has led to a lean procurement unit given less employees are required	1	2	3	4	5
(301d) E-business practices has reduced transport and postage costs	1	2	3	4	5
(301e) E-business practices provide cheaper mechanisms of interacting with suppliers	1	2	3	4	5

(301f) Organization experienced significantly reduced failure costs through the use of e-business	1	2	3	4	5
(300g) Sourcing costs has been reduced through the use of e-business practices	1	2	3	4	5

Part IV: E-business practices and Lead times (401)

(401a) Inventory management has been improved through the use of e-business practices	1	2	3	4	5
(401b) Delivering delays by suppliers has been reduced by e-business practices	1	2	3	4	5
(401c) E-business practices led to quickly handled emergency procurement	1	2	3	4	5
(401d) Organization enjoys fast information sharing with its supplier through e-business practices	1	2	3	4	5
(401e) Lead times reduced through integration of processes by e-business practices	1	2	3	4	5

Part V: E-business practices and Quality of Supplies (501)

(501a) Our Customers enjoy quality products consistently	1	2	3	4	5
(501b) Organization succeed to reduce customer complaints by higher percentage through e-business	1	2	3	4	5
(501c)There is reduction of complains about procurement process in the organization	1	2	3	4	5
(501d) Organization enjoying huge increase of customers	1	2	3	4	5

Interview Guide

(Organization)

1. How do you conduct stock taking in your organization
2. Do you see any advantage of conducting stock taking electronically? Please explain
3. Do you use electronic re-order points? What are the benefits?
4. In your experience what have been changed since the introduction of electronic inventory management systems**?**
5**.** How do you normally obtain your goods for sale?
6. Do you apply E-tendering in finding your supplier? How do you benefit from it?
7. What do you benefit from paying your suppliers electronically?
8. Do you consider e-invoicing as more suitable?
9. Do you have records/Data management software? How do you benefit?

Interview Guide

(Customers)

1. For how long have you been buying from this supermarket?
2. Are your needs always served when you come at this supermarket?
3. What suggestions can you give to improve the operations of the supermarkets in order to serve better its customers?