

**FACTORS AFFECTING EFFECTIVE IMPLEMENTATION OF E-PROCUREMENT
IN SUPERMARKETS' SUPPLY CHAIN MANAGEMENT IN NAIROBI AND ITS
ENVIRONS, KENYA**

BY

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DECLARATION

I declare that this proposal is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

All organizations around the globe seek to identify strategies that will improve their performance as far as their day to day activities are concerned. Businesses such as Supermarkets that engage customers and suppliers alike thrive when they are based on up-to-date supply chain management strategies that keep up with the needs of both parties. One such strategy that is based on Information Technology is E-procurement. This study was set out to investigate the Factors Affecting Effective Implementation of E-Procurement in Supply Chain Management in Supermarkets in Nairobi and its environs. In order to achieve this, the study aimed to identify the effect of employee competence, cost of implementation, management involvement and management commitment on effective management of supply chains of Supermarkets in Nairobi and its environs. The three main theories on which the study was anchored included the Resource Based View (RBV), Dynamic Capability Theory and the Contingency Theory of Management. The study also adopted a descriptive design because it allowed an in depth description of the factors that determine the effective implementation of e- procurement as a business strategy for sustainable supply chains in supermarkets in Nairobi. The study targeted all the supermarkets based in Nairobi and its environs and the researcher employed the use of questionnaires to collect data. The analysis of data was done using SPSS version 22 which provided a thorough description of the demographic information of the respondents and also used regression analysis to analyse mean and gave an elaborate relationship between factors affecting the implementation of e-procurement. Results from this study revealed that employee competence, management involvement and management commitment have a positive relationship to the effective implementation of e-procurement. Cost of implementation on the other hand had a negative relationship. These effects were also proved to be statistically significant through hypothesis tests. An R-Square of 0.485 was found implying that 48.5% of the independent variable, which were Level of Management Commitment, Management Involvement, Cost of Implementation and Employee Competence explained the independent variable, which was Implementation of e-procurement. A statistically significant F calculated value of 4.083 ($p = 0.005$) also implied that the regression equation generated by the study predicts the dependent variable significantly well. The study therefore recommended that supermarkets should ensure that their employees are competent, reduce implementation costs and finally ensure top management and commitment if they are to effectively implement e-procurement. This will also ensure that they have sustainable supply chains.

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DEDICATION

To Sheila my sister and ally, and to Alice, and my brothers Isaac, Amos and Caleb, whose resilience, support and understanding have always inspired me all through this course

To Dad and Mum, your tears fuelled my impetus, your eronomouse effort and perpetual moral fibre and fortitude indeed enthuses me. It's not in vain.

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ACCRONYMS AND ABBREVIATIONS

IT Information Technology

RBV Resource Based View

KISM Kenya Institute of Supply Management

SCM Supply Chain Management

SPSS Statistical Package for Social Sciences

VIF Variance inflation factor analysis

ICT Information Communication Technology

TSC Teachers Service Commission

OPERATIONAL DEFINITION OF TERMS

E-procurement: integrating internet technology into the process of procurement of logistics (Lilien, 2012)

Supply Chain: the wide network of activities and facilities that performs the myriad functions to support product development, procurement of goods and the distribution of ready-to-use products as well as after sales support (Stadtler, 2015).

Supply chain management: the collaboration of major business processes from the original suppliers all the way to the end users who need the products, services, and information that add value to consumers as well as other stakeholders (Stadtler, 2015).

Major Supermarket: is defined as a large retail shop, usually more than 2000 square feet, operated mainly on a self-service basis. It houses a variety of goods including food stuff, meat products, fruits and vegetables, baked products, dairy products, household furniture etc. (Matsa, 2011).

Main Supermarket Branch: The main operational base of a specific supermarket that has a chain of other supermarkets in other geographical locations (Makau and Onyango, 2010, March 14).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

All organizations around the globe seek to identify strategies that will improve their performance as far as their day to day activities are concerned. Their main goal is to reduce operational cost while at the same time increase profits. Cronin, Smith, Gleim, Ramirez and Martinez, (2011) asserted that in order for organizations to be operationally optimal, there is need to adopt clear supply chain management policies that will not only ensure that operations take place smoothly, but also reduce the costs associated with these operations thereby increasing profits. Businesses such as Supermarkets that engage customers and suppliers alike thrive when they are based on up-to-date supply chain management strategies that keep up with the needs of both parties. Today, it is easier to keep up with these trends through the use of Information Technology. Web-based systems enable firms now more than ever to better understand supply and demand forces, thereby improving the accuracy of decisions made by these businesses.

One such strategy that is based on Information Technology is E-procurement. This strategy is fast becoming a viable supply chain management strategy as the wider understanding of its many uses becomes apparent. The main reason why global and local companies have embraced e-procurement is to increase productivity, provide visibility into day-to-day transactions and make it easier for users to get the supplies that they need (Quesada, González, Mueller and Mueller, 2010). Additionally, this strategy has enabled these businesses to change their focus from the mundane activities they were used to before into strategic tasks that can help them gain a competitive advantage in the marketplace. However, it has not been an easy road as its implementation has its own challenges. Therefore, it has taken time for business managers and procurement departments to fully accept it. The good

news is that its advantages are slowly being understood by many, and its adoption is fast becoming the most sought after supply chain management strategy (Trkman and McCormack, 2010). Through this study, business managers and procurement departments will be able to identify factors affecting the effective implementation of e-procurement in supermarkets' supply chain management and be able to know how to tackle them so as to ensure that they are able to better manage the adoption of this strategy.

1.1.1 E-Procurement as a Business Strategy

E-procurement simply means integrating internet technology into the process of procurement of logistics. It often includes processes such as advisory, planning and processing in the supply chain management system (Public Procurement and Asset Disposal, 2015). E-procurement therefore is the use of information technology to manage the procurement process in a business with the aim of ensuring a sustainable supply chain system. Grewal and Lilien, (2012) viewed e-procurement as the business-to-business, business-to-consumer or business-to-government purchase and sale of supplies, work and services through the internet and networking systems.

Adopting E-procurement practices by a business serves to reduce purchasing cycle time and costs, enhance budgetary controls, eliminate administrative errors and increase buyers' productivity. Moreover, it lowers prices through product standardization and consolidation of goods bought. More importantly, e-procurement practices better payment processes and makes information management easy for a given business (Monczka, Handfield, Giunipero and Patterson, 2015). Over the years, as firms have aggressively pursued cost-cutting measure but they have started to reach the point of diminishing returns within their organizational boundaries. Consequently, organizations are fast shifting their focus to the benefits of online purchasing through the adoption of e-procurement. As a result, businesses have not only managed to cut costs, but have also improved performance.

Through e-procurement, businesses are no longer experiencing diminishing returns. Instead, they are now able to deal with more suppliers in better purchasing strategy that assist in slashing administration costs, improving decision making and increasing the delivery of goods available for sale.

Although e-procurement is still in its burgeoning years, most organizations have made impressive feats through radical streamlining of their procurement processes. Adopting it as a supply chain management strategy has enabled the automation of the procurement and purchasing processes as well as the integration of buyers and suppliers through IT systems that add value and synergy to the businesses. As such, this automation of procurement services has taken over the traditional processes of ordering for materials and products needed by businesses for purposes of selling to consumers. It assists in improving efficiency in organizations and controlling the procurement activities. The advent of cloud computing concepts and usage of cloud processes have also aided procurement process as they are used as part of e-procurement strategy (Quesada, González, Mueller and Mueller, 2010).

Despite the innumerable benefits attributed to e-procurement, organizations are not utilizing this technology-based strategy to the maximum. Implementing e-procurement requires a vast amount of resources in the form of Information technology. Moreover, strong project management skills are required to support the different aspects of implementation that include change management. Such reasons may lead to slow adoption of e-procurement or incomplete exploitation of e-procurement benefits (Trkman and McCormack, 2010). It is also important to note that lack of proper skills and abilities can limit the productivity of workers with respect to e-procurement systems. Competence based models suggest that the ability of a firm to adopt, assimilate, and exploit novel technologies is directly related to the organization's human resources portfolio (Aman and Kasimin, 2011). These form some of the reasons why some businesses find it hard to adopt it.

1.1.2 Supply Chain Management

A supply chain refers to the wide network of activities and facilities that performs the myriad functions to support product development, procurement of goods and the distribution of ready-to-use products as well as after sales support. According to Stadtler, (2015), supply chain refers to the activities that are associated with the changing and flow of goods and services from the point of source to the point of demand. Consequently, supply chain management is also perceived as the collaboration of major business processes from the original suppliers all the way to the end users who need the products, services, and information that add value to consumers as well as other stakeholders (Stadtler, 2015).

Having a sustainable supply chain is the goal of each and every profit making business. By managing and improving environmental, social and economic performance throughout supply chains, businesses can conserve resources, optimize processes, uncover product innovations, save costs, increase productivity and promote corporate value (Christopher, 2016). While many companies have supply chains, few comprehensively understand the sustainability impacts these supply chains can have. On the other hand, the few companies that incorporate sustainability into their supply chain find it hard to implement it. However, failure to implement it is a less risk than not incorporating it at all. This is because there are several initial steps that can be taken to ensure that the business moves toward sustainable supply chains.

The ultimate goal of any company for using the supply chain management would be to reduce the inventory supposed that the raw materials we needed are available (Alftan, Kaipai, Loikkanen & SPens, 2015). The numbers of companies interested in improving their supply chain management are increasing many web based application service providers are competing with the software systems provided with web interfaces for the company. With their business models under attack from all sides, grocers need to embrace innovation and

creative supply chains to survive. There is also need to expand into new markets as well as adapt to new cultural values and consumer preferences. It is also true that through supermarkets need to gain global reach by forming strategic partnerships and adapting to distinct cultural traditions and preferences.

It is important to note that a supermarket's advantage is purchasing power on the one hand and order preparation by the customer on the other. The logistics of supermarkets to have the lowest possible purchasing price from suppliers is to purchase a maximum of full truckload replenishments. This requires large warehouses that are as close as possible to the supermarket. They need to be close to being able to deliver everyday fresh produce and allow stores to have as little stock as possible. As pointed out by Makau (2015), they also need to reduce cost-to-serve and improve store sourcing and inbound transportation costs.

1.1.3 Supermarkets in Nairobi and Its Environs

A supermarket is defined as a large retail shop, usually more than 2000 square feet, operated mainly on a self-service basis. It houses a variety of goods including food stuff, meat products, fruits and vegetables, baked products, dairy products, household furniture etc. (Matsa, 2011). Being a retail shop, most of these goods are procured from several suppliers. This implies that supermarkets have a rather complex supply chain system that could benefit through the implementation of e-procurement.

Being the largest city in Kenya, Nairobi is home to the highest number of supermarkets in the country. There are a total of 25 major supermarkets that fit the description of a supermarket provided by this study. Most of them were established towards the end of the 19th century. Some of the most notable brands include Nakumatt, Tusksys, Naivas and Uchumi. Nakumatt is a wholly Kenyan, privately held company, owned by the Atul Shah family. It has the most number of supermarket chains and has established itself in

the African Great Lakes countries of Kenya, Uganda, Rwanda and Tanzania. It has 46 stores in Kenya, nine in Uganda, five in Tanzania, three in Kigali and one store in Burundi. Tuskys is the second-largest supermarket chain in the African Great Lakes region, behind Nakumatt. It owns and operates nearly fifty supermarkets in Kenya and Uganda as of June 2015. It is also a wholly Kenyan, privately held company owned by seven children of Joram Kamau, the founder of the business who died in 2002 (Makau and Onyango, 2017). Naivas Supermarkets is the third largest chain of supermarkets after Tuskys and Nakumatt. It has 40 retail outlets in many urban centres in the country. It is also a privately owned company, whose shares are held by the descendants of its founder Peter Mukuha Kago, who died on 6 May 2010 (Makau and Onyango, 2017). On the other hand, Uchumi was founded in 1975, as a public limited liability company. The company currently operates 24 outlets in Kenya as of November 2015 (Makau and Onyango, 2017). The other supermarkets operate less than 10 retail outlets (See Appendix II).

E-procurement is a key strategy for supermarkets to adopt as it ensures that they have a sustainable supply chain (Trkman and McCormack, 2010). To have a competitive advantage over key competitors, each supermarket seeks to increase its portfolio of goods and services it offers. In most cases, this means an increase in the number of suppliers. This only serves to make the supply chain complex, thus the adoption of e-procurement makes it easier to manage the system. It is, however, important to note that these supermarkets are bound to face complications in its implementation. This study intends to identify these factors and provide suggestions on how to combat them in order to ensure the sustainability of the supply chains.

1.2 Statement of the Problem

Despite the innumerable benefits attributed to e-procurement, retail businesses are not utilizing this technology-based strategy to the maximum. The fact that these businesses need

to maintain sustainable supply chains grows stronger since markets are constantly becoming more competitive. Adopting e-procurement is likely to reduce purchasing cycle time and costs, enhance budgetary controls, eliminate administrative errors and increase buyers' productivity. Moreover, it may lower prices through product standardization and consolidation of goods bought. More importantly, e-procurement practices better payment processes and makes information management easy for any given business (Monczka, Handfield, Giunipero and Patterson, 2015).

It is also important to note that almost all supermarkets in Nairobi have well established supply chains that serve to supply goods sold in retail stores. However, few comprehensively understand the sustainability impacts these supply chains can have. Additionally, the few supermarkets that incorporate sustainability strategies into their supply chain find it hard to implement them. Despite all these, these retail stores cannot afford the luxury of failing to implement it let alone choose not to incorporate a strategy at all. This study may highlight some of the challenges that are likely to be faced during the implementation process.

In order to establish the knowledge gap, the researcher reviewed a number of studies that have been conducted on the possible impact of e-procurement in organizations around the world. For instance, while studying E-procurement and procurement performance of supermarkets in Nairobi, Makali (2015) aimed to assess the adoption of e-procurement, to evaluate procurement performance and to determine the contribution of e-procurement to procurement performance in supermarkets in Nairobi. The study found out that the adoption process is far from optimal and a lot needs to be done to enhance the migration of procurement functions to the e-platforms. It also established that e-procurement in supermarkets helps enhance cost efficiency by reducing wastage. Additionally, e-procurement contributes greatly towards better communication between the different

departments and branches thus it helps ensure operational efficiency and effectiveness. However, that study only covered the two major supermarkets, Nakumatt and Tusky's. This study intends to get results that cover a wider area. On the other hand, Mwongela (2014) while conducting a study to establish the effect of e-procurement adoption on supply chain performance among commercial banks in Nairobi found out that majority of the commercial banks in Nairobi, Kenya have adopted e-procurement with the following e-procurement practices: online advertisement of tenders, receiving online submission of proposals for the tenders, and short listing suppliers online among others. It is also important to note that these results reflect on Commercial Banks only. Ratanya (2013) investigated the effect of e-procurement implementation and business integration among large scale manufacturing firms in Nairobi and revealed that the firms share information among departments and centralization of procurement activities is also evident among them. However, it is clear that a number of important e-procurement aspects have not been implemented by these firms. Five barriers to e-procurement implementation were revealed and they include: getting users to accept the system; lack of internal integration of functions; resistance from suppliers; lack of willingness from other stakeholders and lack of enough finances to support the system implementation. King'ori (2013) explored the effects of e-Procurement on Supply Chain Management by taking a case of Teachers Service Commission (TSC) and found that there was a strong relationship between e-Procurement, the levels of ICT expertise and the levels of e-Procurement application. This indicates that the Supply Chain Management is highly correlated with Supply Chain practices and e-Procurement applications. Finally, Muturu (2016) also studied Sustainable procurement strategies and supply chain performance of Five-Star hotels in Nairobi County, Kenya and revealed a near perfect positive relationship between sustainable procurement strategies and supply chain performance. Oporo (2014) also studied Factors influencing e-procurement application at Kenya revenue authority. The

researcher highlighted the fact that recent changes in the Kenyan political landscape have brought about cuts in public sector spending and the demands of government institutions to be efficient in their operations. The findings were that there was some difficulty selling the e-procurement concept internally to organisational stakeholders such as senior management and end-users, a lack of confidence, a fear of making errors, lack of technology and innovation champions within the organisations which has inhibited full acceptance of process. The other factors that were found to affect the e-procurement process include size of the firm and organization readiness (Oporo, 2014)

From all the studies mentioned above, various conclusions were drawn regarding the adoption of e-procurement strategies, its effect on supply chain performance and the best sustainable supply chain strategies to adopt. However, little has been done to assess the challenges that are faced during the implementation of e-procurement as a sustainable supply chain strategy. Moreover, not much has been done in the area of retail and supermarkets where e-procurement would benefit the most through acceleration the movement of goods while at the same time reducing the costs associated with procurement. As such, this research may contribute towards reducing information on the factors affecting effective implementation of e-procurement in supermarkets' supply chain management.

1.3 Research Objectives

The general research objective for this study was to establish the factors affecting effective implementation of e-procurement in supermarkets' supply chain management in Nairobi and its environs, Kenya. The specific objectives were as follows;

- i. To identify the effect of employee competence on effective implementation of e-procurement of Supermarkets in Nairobi and its environs.
- ii. To establish the effect of cost of implementation on effective implementation of e-procurement of Supermarkets in Nairobi and its environs.

- iii. To determine the effect of management involvement on effective implementation of e-procurement of Supermarkets in Nairobi and its environs.
- iv. To assess the effect of the level of management commitment on effective implementation of e-procurement of Supermarkets in Nairobi and its environs.

1.4 Research Questions

- i. How does employee competence affect effective implementation of e-procurement of Supermarkets in Nairobi and its environs?
- ii. Does the cost of implementation affect the effective implementation of e-procurement of Supermarkets in Nairobi and its environs?
- iii. Can level of management involvement affect the effective implementation of e-procurement of Supermarkets in Nairobi and its environs?
- iv. What level of management commitment is required for effective implementation of e-procurement of Supermarkets in Nairobi and its environs?

1.5 Justification of the Study

This study was conducted to establish the factors affecting effective implementation of e-procurement in supermarkets' supply chain management in Nairobi and its environs, Kenya. This implies that owners of supermarkets within the city would be the first benefactors of the study. Through the findings of this study, managers will be able to not only learn about the challenges they are likely to face during the implementation of e-procurement as a business strategy to ensure sustainable supply chains, but they will also get to understand the best ways to go about its implementation. This would enable them gain a competitive advantage over their key competitors. This study also intended to add to the vast body of knowledge regarding the use of e-procurement as a business strategy aimed at maintaining a sustainable

supply chain. It can be used for future references by individuals conducting researches on related topics.

1.6 Scope of the Study

This study focused on the factors affecting effective implementation of e-procurement in supermarkets' supply chain management in Nairobi and its environs. This means that the study covered all Supermarkets that are located within the Nairobi City and its environs. However, given the fact that there are several tiers to these supermarkets, the study only focused on the major supermarkets, with more than five retail stores countrywide. This is also because there is a very low chance that small supermarkets have adopted e-procurement in their supply chain practices. This therefore narrowed down the scope to fit the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter was set to present the literature review of the study. It examined various theories based on how e-procurement can play a role in supply chains and their sustainability. Various studies related to the topic of study were also reviewed under the empirical review. Finally, the chapter also presented a discussion of the variables included in the study, a conceptual framework about them and how they were operationalized.

2.2 Theoretical Review

Several theories were adopted by the study in order to bring out the sustainability of supply chains and how e-procurement can play a role in it. To elaborate this, the study adopted the following theories: Resource Based View (RBV), Dynamical Systems theory and Contingency Theory of Management.

2.2.1 *Resource Based View (RBV)*

The Resource Based View (RBV) theory was developed by Barney and Wernerfelt in their analysis of heterogeneous firms. It asserts that the resources of an organization are key to ensuring that it performs well. These resources are what determines if an organization has an added advantage over the rest. As a result, exploiting surrounding opportunities using available resources in a new way is more efficient rather than acquiring new skills for each different opportunity. According to the RVB theory, resources can be classified into organizational capital resources, physical capital resources and human capital resources. Allocating them efficiently helps an organization to achieve greater performance (Lynch et al., 2000).

Research suggests that E-procurement links corporate buying to the internet (Parida & Parida, 2005). More so, a retail or supermarket with a complex supply chain can put its resources into very good use if it employs e-procurement practices such as e-sourcing, e-tendering, e-order processing and e-communication. Just as RVB suggests, this will improve the performance of the company, thereby ensuring that the supply chain is sustainable. As such, this theory was found to be relevant in explaining e-procurement and sustainable supply chains in supermarkets. Additionally, based on this theory, it can be seen that supermarkets will only be successful if they have the necessary resources that are equal to the standards in which they operate in. Supply chain management is key to ensuring that these resources are utilised optimally. It can also be argued that thanks to RVB theory, supermarkets are likely to find the use of e-procurement more efficient because it not only ensures that the resources are evenly distributed but also ensures their effective utilization.

2.2.2 Dynamic Capability Theory

The aspect of dynamic capability was first coined by David Teece, Gary Pisano and Amy Shuen. The theory describes an organization's ability to deliberately organize its resources in an effort to improve performance. According to Chien and Tsai (2012), dynamic capability is the capability of an organization to purposefully adapt an organization's resource base. An organization should be able to react adequately and timely to external changes. This requires the adoption of different strategies that will harness multiple capabilities of the organization and put them into use. This will give the company the ability to integrate, develop, and leverage on the environmental competitive advantage.

Indeed, the current business world is very dynamic. Changes ranging from organizational structures, culture, marketing and customer's tastes and preferences are taking a different path. As such, organizations should have the ability to respond to these changes in the most effective manner (Chien and Tsai, 2012). The dynamic capability theory asserts that

only organizations able to achieve this will actually be able to break even in this competitive world. While RVB emphasizes on sustainable competitive advantage, this theory insists on the key issues surrounding this sustainable competition. It focuses on the survival of an organization in the event of rapid changes. This is a trait senior managers in high end organizations ought to understand in order to keep all stakeholders happy during these tough and dynamic times.

This theory is related to the topic of study because supermarkets today are in a retail market that is highly dynamic and competitive. Changes in marketing strategy, organizational structure as well as tastes and preferences among customers is prevalent. Evidently, e-procurement integrates the in-house and external procurement components to address dynamics in the way organizations achieve operational excellence by reducing cost and saving on time used to procure goods (Mwenga, 2016). Additionally, e-procurement is IT based, and will almost always be up to date with the latest trends in the market. This implies that a supermarket that employs e-procurement will have a supply chain system that is up to date as far as trends in the market is concerned. This, in itself, equally implies that the organization's capabilities remain dynamic. Based on this, the study chose to include this theory as it best explains the need to have e-procurement as a business strategy for supermarkets.

2.2.3 Contingency Theory of Management

The contingency theory holds the thought that circumstances play a critical role in determining the best possible response. The approach was developed by researchers at Ohio State University during the early 1950's. Kulkarni, (2017), asserted that the optimal course of action an organization can take is only dependent upon the external and internal situation. As such, it is safe to say that there is no best way to organize, lead or decide for an organization other than by considering the circumstances in which it finds itself in.

Management is key in almost all organizations in the world today. While there is no manual to managing these organizations, the contingency theory offers managers an opportunity to optimise the course of action they take. This way, they will be able to effectively apply these contingencies to their own style of leadership. There are four approaches to these contingency theory (Burrell and Morgan, 2017). First, organizations need to understand that they are open systems that need careful management to satisfy and balance internal needs and to adapt to environmental circumstances. Secondly, there is no one best way of organizing and that the appropriate form depends on the kind of task or environment one is dealing with. Thirdly, management must always be concerned with achieving alignments and good fits above anything else. Finally, different types or species of organizations are needed in different types of environments. There are those organizations that need constant supervision and those that don't. There are also those that need immediate results and those that take a long time to achieve the desired results. These changes the approach managers should take (Burrell and Morgan, 2017).

As such, this theory can be used to best explain the choice for an e-procurement based strategy as a way of improving the sustainability of a supply chain brought forth by this study. Supermarkets operate in a highly competitive environment that requires them to keep up with the best strategies they can get their hands on. This is the situation or the current circumstance in which they find themselves (Makali and Chirchir, 2015). In order to lead these companies in the right direction, there is need to identify the best practices in the form of e-procurement. Based on this strategy, managers in these organizations will be able to make sound decisions that will be in line with their suppliers and customers, thereby improving performance. As such, this study handpicked this theory as it best explains the reasons as to why supermarkets need e-procurement as a strategy to improve sustainability of their supply chains.

2.3 Empirical Review

Various studies have been conducted to establish the factors affecting effective implementation of e-procurement in supermarkets' supply chain management in Nairobi and its environs, Kenya. This section was used to elaborate each e-procurement aspect and how other studies have identified challenges in their implementation.

2.3.1 Employee Competence and Effective Implementation of E-procurement

Employee competence is a very important aspect of every organization in virtually every field. Organizations need to have competent and skilled workers in order to use their resources optimally. This is critically important to IT resources that are largely required in an e-procurement environment. Organizations such as supermarkets that employ e-procurement will have to have employees who have the technical know how to use these resources. Competent employees bring intellectual, good leadership, are self-managed and have a better interpersonal relationship. All these serve to improve the organization's overall supply chain performance (Spense and Spenser, 2008).

This was retaliated by Makali, (2015) in her study on E-procurement and procurement performance of supermarkets in Nairobi. It was set to assess the adoption of e-procurement; to evaluate procurement performance and to determine the contribution of e-procurement to procurement performance in supermarkets in Nairobi. The study was informed by need to generate data on best practices in the supermarket sector in the highly competitive and globalized environment. The study collected data using semi structured questionnaires. The findings show that adoption of e-procurement is still relatively low at 56% of the supermarkets and most supermarkets adopted e-procurement practices less than a year ago. Also, according to the respondents, the study established that the adoption process is far from optimal and a lot needs to be done to enhance the migration of procurement functions to the e-platforms. Further, the study established that e-procurement flourishes in an environment

with competent employees. Considering lead times, adoption of e-procurement enhances efficiency by enabling integration of departments and branches. Further, e-procurement contributes greatly towards better communication between the different departments and suppliers thus it helps ensure operational efficiency and effectiveness. The study recommended that the supermarkets that plan to adopt e-procurement should scale down on traditional procurement activities if the benefits of e-procurement are to be realized. Additionally, they should focus more on streamlining it because a strong and significant relationship exists between this e-procurement process and procurement performance in supermarkets as far as employees are concerned (Makali, 2015).

In another study by Mutisya (2015) on Technology as a competitive advantage in Supermarket operations in Nairobi County, it was asserted that indeed Technology is a prerequisite for globally competitive organizations. This study, which adopted a cross-sectional research design, found that the adoption and applications of technology improved operational performance of the supermarkets.

Also while studying Extent of Adoption of Information Communication Technology in Supply Chain Management among Supermarkets in Kenya, Kiura (2012) asserted that most organizations in the modern world are under pressure to better manage the supply chain and to improve efficiency and logistics operations. This has thus far pushed the need to adopt ICT in the management of supply chain. In the study, Kiura (2012) pointed out that Different business have been adopting Information and Communication Technologies for different activities at different pace due to various unique reasons and hence the variation in the level of Information and Communication Technologies adoption. The study found that many supermarkets have embraced the use of Information and Communication Technologies in different departments and sections and recommends different stake holders in the sector to

work together and also to see how they can work on the challenges that hinder the use of Information and Communication Technologies in supermarkets.

2.3.2 Cost of Implementation and Effective Implementation of E-procurement

Just like any other technology related program, the implementation of e-procurement in organizations is expensive. This often includes time commitment, licensing costs, consultant costs, pulling people away from their day to day job for process planning as well as system testing. Also, the software itself usually has regular upgrades and costs associated with IT maintenance. Clearly, these systems require a lot of resources.

Ratanya (2013) in her study on E-procurement implementation and supply chain integration among large scale manufacturing firms in Nairobi, Kenya, found a number of constraints to the implementation of e-procurement that are related to the high costs. The study sought answers to the extent of e-procurement implementation, barriers its implementation and the impact of its implementation on supply chain integration among large scale manufacturing firms in Nairobi. It was revealed that the firms share information among departments and centralization of procurement activities is also evident among them. However, it is clear that a number of important e-procurement aspects have not been implemented by these firms. Five barriers to e-tendering implementation were revealed and they include lack of willingness from other stakeholders, getting users to accept the system, lack of internal integration of functions and resistance from suppliers. All these challenges require the organization to use resources in order to combat them through marketing strategies and creation of awareness through training. Finally, the study found that e-procurement implementation explains only 57% of supply chain integration among large scale manufacturing firms in Nairobi (Ratanya, 2013). This study therefore recommended that large scale manufacturers in Nairobi should link their suppliers. It will also be important to conduct a comparative study to establish the similarities and differences.

Rotich (2014) sought to identify the Dynamic procurement practices and supply chain performance of supermarkets in Nairobi, Kenya. The study was guided by the following objectives; to determine the dynamic procurement practices used by supermarkets in Nairobi, Kenya, and to establish the relationship between dynamic procurement practice and supply chain performance of supermarkets in Nairobi, Kenya. Using descriptive research design, these study supermarkets have become more competitive, flexible and efficient with regard to procurement practices. The findings revealed that there has been growth in customer satisfaction and retention, improved quality, increased productivity, organization effectiveness, and improved customer's quality of life for the years 2009-2013. The study therefore concluded that Strategic Supplier Partnership and Information technology adoption influence supply chain performance of supermarkets in Nairobi Kenya while collaboration , agile procurement, lean and information technology adoption dynamic procurement practices negates supply chain performance of supermarkets in Nairobi Kenya as they have negative coefficients (Rotich, 2014).

Nzuve (2013) also investigated the implementation of e-procurement practices among private hospitals in Nairobi, Kenya. In his study, the researcher acknowledged that the role of purchasing in corporate success has changed considerably due to the advances in information technologies and information systems. E he also asserted that e-procurement has thus gained strategic visibility in its role in enhancing inter-functional and inter-organizational relationships and has emerged as the driving force behind several supply chain practices. The study found that e-procurement had been implemented to a moderate extent by the NHIF accredited hospitals. Seven factors that influence e-procurement implementation were identified through factor analysis. These include: risk perception, end user training, existing technology, top management support, supplier systems integration, implementation strategy and vendor support. Of these, risk perception had a negative relationship with e-procurement

implementation while Existing Technology, Top management support and implementation strategy all had positive relationships (Nzuve, 2013)

2.3.3 Level of Management Involvement and Effective Implementation of E-procurement

All organizations need to have a participative management in their day to day operations (Khan and Igbal, 2016). Undoubtedly participative approach to management increases the stake or ownership of employees. An increased say in decision making means that there is a strong feeling of association. It also translates to the employees that they should assume responsibility and takes charges. This, in the long run, ensures that there is lesser new or delegation or supervision from the manager and when there is a lesser need of supervision the organization tends to function better. Lastly, increased productivity and job satisfaction cannot exist unless there is a high level of motivation in the employee. Decentralized decision making means that everyone has a say and everyone is important (Khan and Igbal, 2016).

To elaborate this, the following study is reviewed. King'ori, (2013) conducted a study to establish the effect of e-procurement on supply chain management at teachers' service commission. The study's objectives were to determine the procurement practices in TSC; to establish the level of e-Procurement application in TSC and to determine the challenges encountered when implementing e-Procurement system in TSC. Data collected was analysed using descriptive statistics and presented in frequency tables. The study revealed that there was a strong relationship between e-Procurement, the levels of ICT expertise and the levels of e-Procurement application. This further indicated that the Supply Chain Management is highly correlated with Supply Chain practices and e-Procurement applications. However, the level of management support on e-Procurement application is low. Therefore the study recommended management at TSC to increase the level of e-Procurement applications as well as the practices such as e-order processing since they seem to have a positive impact on Supply Chain Management (King'ori, 2013).

Another study conducted by Keana (2015) on automated procurement systems and performance of supermarkets in Nairobi revealed that majority of supermarkets relied on electronic mail and automated identification bar-coding systems to transact their procurement operations more than any other systems mentioned to them. It was also established that time was saved and this propelled the retail chains to gain competitive advantage in the supermarket industry. Moreover, accuracy of products ordered and delivered was maintained when those systems were used. Lastly, the results established that the degree of correlation of the independent predictor (automation of procurement systems) and performance of supermarkets was not strong due to various challenges stretching from; high cost of system implementation, slow user acceptance of new automated procurement systems, lack of management support in adoption of new systems, inadequate IT and networking infrastructure and inadequate employee training (Keana, 2015).

Kitheka (2012) also conducted a study on Inventory management automation and the performance of supermarkets in western Kenya. The study focused on major supermarkets in western Kenya with the largest market share. In the study, the researcher asserted that many firms have not yet established how much to invest in inventories and the right inventory levels to hold so as satisfy customers. Organizations have therefore turned to using modern technology to overcome such challenges. Results on the other hand indicated that the extent of inventory management was found to be high among the supermarkets. It recommended supermarkets to decentralize their management structures, encourage specialization of labour and do enough research before investing in any new technology (Kitheka, 2012).

2.3.4 Level of Management Commitment and Effective Implementation of E-procurement

A commitment refers to any action taken in the present that binds an organization to a future course of action (Oropesa, Del Risco, Perez and Lara, 2016). Commitments are essential to

management because they are the means by which a company secures the resources necessary for its survival. For instance, investors, customers, and employees would likely shun any company whose management refused to commit publicly to a strategy and back its intentions with investments. Commitments are beneficial to an organization because they give employees a clear sense of focus and help them prioritize and coordinate their actions. They're also motivational. They can, in particular, create excitement and energy in difficult times, inspiring employees to persevere despite hardships and setbacks (Oropesa, Del Risco, Perez and Lara, 2016)

A study was conducted by Mwangi (2016) on Information Communication Technology Adoption and Supply Chain Performance of Parastatals in the Kenya's Energy Sector. The study targeted nine parastatals in Kenya's energy sector. The study established a strong relationship between ICT adoption and supply chain performance of the Kenya's energy sector. Level of managerial commitment emerged as a key challenge to the implementation of e-procurement in the nine parastatals. They concentrated on the implementation of e-communication which in turn improves communication internally and externally. Other main challenges to the adoption of ICT are caused by inability of staff to adapt to changes, poor support from the top management and the limited quality of training to staff. The study therefore recommended that deployment of ICT in supply chain is necessary and should be encouraged because of the advantages it would bring to organizations (Mwangi, 2016).

Finally, Tuazama (2015) conducted a research on Supply chain management practices and organizational performance of supermarkets in Nairobi. The study was guided by the following specific objectives; to establish the supply chain management practices commonly used by supermarkets in the Kenyan retail chain sector and to determine the relationship between supply chain management practices and organizational performance of supermarkets

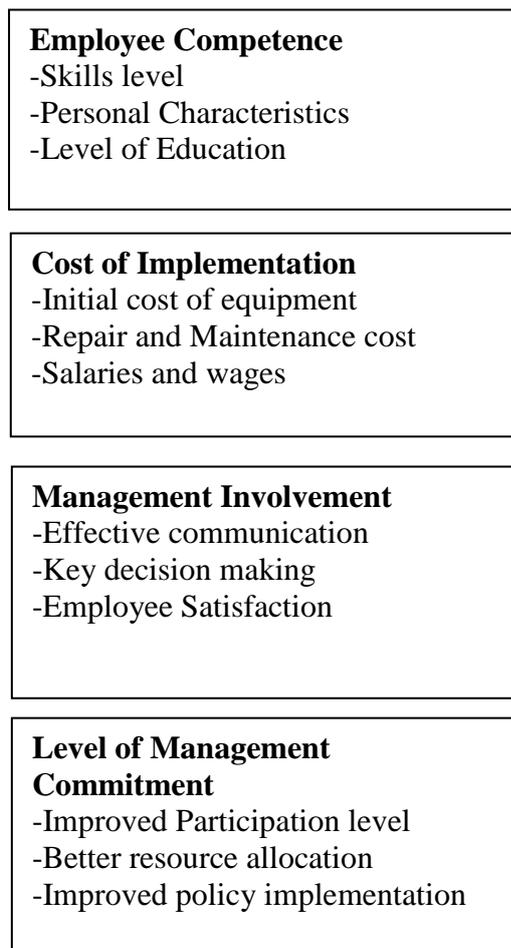
in the Kenyan retail chain sector. The study findings indicated that Information sharing among the supply chain partners is related to the degree of critical and proprietary information shared among each other's. Information sharing involved information related to logistics, customer orders, forecasts, schedules, market and so on. As part of supply chain practice the researcher concludes that outsourcing enable costs reduction activities, improve productivity and reemphasize the organization to relook into their core business, refocus the organizations strategy, re-examine the investment and help the organization to improve their efficiency and improve their performance (Tuazama, 2015).

Oporo (2014) also studied Factors influencing e-procurement application at Kenya revenue authority. The researcher highlighted the fact that recent changes in the Kenyan political landscape have brought about cuts in public sector spending and the demands of government institutions to be efficient in their operations. The findings were that there was some difficulty selling the e-procurement concept internally to organisational stakeholders such as senior management and end-users, a lack of confidence, a fear of making errors, lack of technology and innovation champions within the organisations which has inhibited full acceptance of process. The other factors that were found to affect the e-procurement process include size of the firm and organization readiness (Oporo, 2014)

2.4 Conceptual Framework

The conceptual framework adopted by this study was used to describe the dependent and the independent variables. The dependent variable was implementation of e-procurement. Independent variables were represented by employee competence, cost of implementation, level of management involvement and management commitment. This is captured in figure 2.1

Independent Variables



Dependent Variables

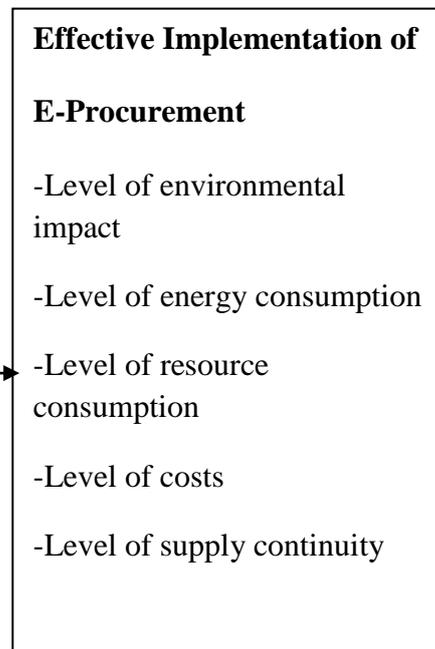


Figure 2. 1 Conceptual Framework

2.5 Operationalization of the variables

Table 2. 1 Operationalization of the variables

Type of Variable	Variable	Indicator	Level of Measurement	Data Collection Method
Dependent	Supply Chain Management	-Level of environmental impact -Level of energy consumption -Level of resource consumption -Level of costs -Improved supply continuity	Ordinal	Questionnaire
Dependent	Employee Competence	-Skills level -Personal Characteristics -Level of Education	Ordinal	Questionnaire
Independent	Cost of Implementation	-Initial cost of equipment -Repair and Maintenance cost -Salaries and wages	Ordinal	Questionnaire
Independent	Level of Management Involvement	-Effective communication -Key decision making -Employee Satisfaction	Ordinal	Questionnaire
Independent	Level of Management Commitment	-Level of participation level -Level of resource allocation - Level of improved policy implementation	Ordinal	Questionnaire

Source: Author (2017)

2.6 Research hypothesis

The following were the research hypothesis for this study:

- i. *H0₁: Employee competence has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.*
- ii. *H0₂: Cost of implementation has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.*
- iii. *H0₃: Level of management involvement has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.*
- iv. *H0₄: Level of management commitment has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.*

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presented the research methodology that the study adopted. It included the research design, target population, sampling and sampling procedure, research instrument, validity and reliability of the instrument and finally the data collection procedures, processing and analysis.

3.2 Research design

This study used a descriptive design. This is because it was set to describe the factors affecting effective implementation of e-procurement in supermarkets' supply chain management in Nairobi and its environs, Kenya. This type of research design is preferred because it makes it possible for the researcher to collect information through both personal accounts and observations made by the respondents concerning the topic of study. Lambert, (2012), asserted that this research design gives the respondents the freedom to fully describe the topic under study, meaning that the nature of the topic in hand can be presented in a complete and accurate manner. This is what prompted the researcher to choose it.

3.3 Target Population

The target population for this study was all the supermarkets in Nairobi and its environs. In order for a retail shop to qualify to be described as a supermarket, it has to fit the description provided by this study. There are a total of 25 major supermarkets in the region as listed in Appendix II (Kenya Data Limited, 2016). The entire population was targeted. As such, this study was a census from which three employees were sampled. These will be from the supply chain departments in respective supermarkets found from the 25 supermarkets. They included

supply chain managers, assistant supply chain managers and procurement managers. Their distribution is as identified below.

Table 3. 1 Sample Distribution

No.	Position	Total
1	Supply Chain managers	25
2	Assistant Supply Chain Managers	25
3	Procurement Managers	25
	Total	75

Source: Author (2017)

3.4 Instrumentation and Data Collection

This study adopted questionnaires as its research instrument. According to Rowley, (2014), a researcher should consider using questionnaires depending on the nature of research design chosen. Questionnaires are best suited for a descriptive research design because they give the researcher a larger scope under which to objective responses to research questions (Rowley, 2014).The questions included in the questionnaire were both open and closed ended in nature and were also based on a 5 point Likert Scale. This scale was preferred because it gave a wider scope to the choices available to a respondent, making it the best to obtain the most complete and accurate information possible. Closed ended questions on the other hand facilitated the collection of specific information from the respondents (Allen and Seaman, 2007).

The data collection procedure involves the distribution and collection of data from questionnaires. The drop-and-collect-later method of data collection was adopted by this study. The procedure involves seeking permission from the supermarket’s management. Once given the go ahead, the researcher took two weeks to collect data from relevant individuals chosen to respond. The purpose of the study as well as the objectives were also communicated to them on time, prior to the process.

3.5 Validity and Reliability

The validity of a research instrument is described as its ability to measure all the variables chosen for the study (Golafshani, 2003). The questionnaire was vetted through a pilot study to make sure that its content measures all the variables involved in this study. Reliability on the other hand refers to how consistent the instrument is as far as its measurement of the variables is concerned (Golafshani, 2003). This study employed the test-retest reliability test, where the consistency of the questionnaire was evaluated over time. The study then used Cronbach's alpha (Using SPSS version 22) to test for internal consistency. This revealed whether the content of the questionnaires was reliable.

3.6 Data Analysis and Presentation

The process of data processing and analysis began after a significant number of questionnaires have been submitted back for analysis. The data collected was analysed using descriptive statistics and multiple regression analysis. Descriptive statistics includes means, frequencies, standard deviation and percentages. It was used to describe the demographic factors of the target population such as age, gender, level of education and working experience. This information was presented in the form of tables. A multiple regression model was developed to explain the relationship between the dependent and the independent variables and it was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where Y= Effective Implementation of e-Procurement

X₁= Employee Competence

X₂= Cost of Implementation

X₃= Level of Management Involvement

X₄= Level of Management Commitment.

β₁ - coefficient for Employee Competence

β_2 - coefficient for Cost of Implementation

β_3 - coefficient for Level of Management Involvement

β_4 - coefficient for Level of Management Commitment

ε - Error term

The study used Statistical Packages for Social Sciences (SPSS) version 22 to analyse the data.

3.7 Diagnostic Tests

Diagnostic tests are tests conducted to assess the validity of a regression model. These test procedures are necessary so as to detect violations of the linear model's assumptions, gauge the severity of the violations and take appropriate remedial action.

3.7.1 The Breusch-Pagan Heteroskedasticity Test

Heteroskedasticity is set of assumptions that make it possible for information from a regression equation to be used. This study employed the Breusch-Pagan Test for heteroskedasticity to check if the variance is constant. This was achieved by testing the variances and standard deviations of the model (Cohen, West and Aiken, 2013).

The test statistic follows a chi-square distribution. The hypothesis was as follows:

H₀: that the error variances are all equal

H₁: the error variances are not equal.

A small chi-square value indicated that the null hypothesis was true.

3.7.2 Variance Inflation Factor Analysis (VIF)

This test was used to detect multicollinearity in regression analysis. Multicollinearity is present when the correlation between the independent variables in a model is high. Its presence can adversely affect the regression results of the study (Cohen, Cohen, West and Aiken, 2013). The VIF was used to estimate how much the variance of the study's regression

coefficient is inflated due to multicollinearity in the model. It was detected using the following scale; 1 = not correlated. Between 1 and 5 = moderately correlated. Greater than 5 = highly correlated

3.7.3 RESET Tests

The Ramsey Regression Equation Specification Error Test (RESET) was used to test if the non-linear combinations of the fitted values explain the response variable. Results from this test were used to check for any omitted variables or irrelevant variables.

3.8 Hypothesis testing

The study conducted hypothesis tests to check the significance of the variables included in the study. The study used a t-test, where the rejection rule was that if the calculated value of t was greater than the critical value of t, then the null hypothesis would be rejected. The following hypothesis were to be tested;

H0₁: Employee competence has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

H0₂: Cost of implementation has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

H0₃: Level of management involvement has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

H0₄: Level of management commitment has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

3.9 Research Ethics

Research ethics is all about distinguishing between right and wrong. It illustrates the code of conduct expected by researchers while conducting their research. Since research often involves a great deal of cooperation and coordination among many different people in

different disciplines and institutions, ethical standards promote the values that are essential to collaborative work, such as trust, accountability, mutual respect, and fairness (Oliver, 2010).

Norms are also important because they promote the aims of research, such as knowledge, truth, and avoidance of error. For example, prohibitions against fabricating, falsifying, or misrepresenting research data promote the truth and minimize error. Ethical norms also help to ensure that researchers can be held accountable to the public (Oliver, 2010). For instance, policies on research misconduct, conflicts of interest, the human subject's protections, and animal care and use are necessary in order to make sure that researchers who are funded by public money can be held accountable to the public.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis, presentation and interpretation of the data collected from the questionnaires. The data collected from questionnaires was analyzed with the help of Statistical Packages for Social Sciences (SPSS) version 22. The analysis was done using descriptive statistics such as frequency distribution. The study also used percentages and means to analyze general information collected from the respondents.

4.2 Reliability Test Results

The study used Cronbach's reliability test to determine the reliability of the questions and also to reveal whether the scale used by the study was reliable. According to Bonnet and Wright, (2015), Cronbach's alpha value is interpreted as follows; $\alpha \geq 0.9$ = excellent, $0.9 \geq \alpha \geq 0.8$ = Good, $0.8 \geq \alpha \geq 0.7$ = Acceptable and finally $0.7 \geq \alpha \geq 0.6$ = questionable. Results as indicated in table 4.1 reveal A Cronbach's of 0.831, which implies an excellent internal consistency.

Table 4. 1 Reliability Test

Cronbach's Alpha	N of Items
0.831	31

Source: Author (2017)

4.3 Response Rate

The study administered 75 questionnaires to respondents selected from all major supermarkets within the Nairobi and Its Environs. Of these, 67 were filled and successfully submitted for analysis. This represented a response rate of 89.33%. This response rate was deemed substantial to draw conclusions about the entire population of Supermarkets in Nairobi.

4.3 Demographic Information

An analysis of the description of the respondents was done in this section. This included gender, age bracket, highest level of education, job position held and the duration in that position in terms of years.

4.3.1 Gender, Age and Education of Respondents

An analysis of the gender of the respondents that took part in the research revealed that 52.2% of the respondents were female while 47.8% were male. This implies that an equal number of males and female individuals was included in the study thereby achieving gender parity. An analysis of the age bracket on the other hand revealed that majority of the respondents were between the age of 31 and 35 years as was represented by 32.8%. Additionally, 28.4% of them were between 26 and 30 years, 17.9% were between 36 and 40 years, 14.9% were between 20-25 years while only 6% were above 41-50 years. This implies that the study included individuals who were eligible to take part in the study as far as their age was concerned. This information was summarized in table 4.2.

Table 4. 2 Age Bracket of the Respondents

Age Bracket	Frequency	Percent
20-25	10	14.9
26-30	19	28.4
31-35	22	32.8
36-40	12	17.9
41-50	4	6.0
Total	67	100

Source: Author (2017)

The study also sought to identify the level of education possessed by each respondent that took part in the study. It was revealed that 55.3% of the respondents had attained undergraduate level while 44.8% had attained post-graduate level of education, meaning that the

respondents included in the study were knowledgeable enough to understand the questions being posed to them in the questionnaire.

4.3.2 Work Experience

The study further sought to know the working experience of the respondents in their job capacity as supply chain managers, assistant supply chain managers and procurement managers. The study findings are as shown in Table 4.3

Table 4. 3 Age Bracket

Year Bracket	Frequency	Percent
1-5 years	14	20.9
6-10 years	27	40.3
11-20 years	24	35.8
Above 20 years	2	3.0
Total	67	100.0

Source: Author (2017)

The study found that majority of the respondents had worked in their designated job positions for more than 1 year. Specifically, 20.9% had worked between 1 and 5 years, 40.3% between 6 and 10 years, 35.8% between 11 and 20 years while only 3% had worked for more than 20 years. This further indicates that the respondents chosen had experience regarding the topic of study and are therefore in the best position to answer the questions.

4.4 Descriptive Statistics Results

The objectives of this study were to investigate the effect of employee competence, cost of implementation, management involvement and management commitment on effective implementation of e-procurement of Supermarkets in Nairobi and its environs. This section presented their descriptive results.

4.4.1 Employee Competence on Effective Implementation of E-Procurement

Table 4.4 presents that respondent’s feedback on the effect of employee competence on effective implementation of e-procurement of Supermarkets in Nairobi and its environs.

Table 4. 4 Employee Competence on Effective Implementation of E-Procurement

Question	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean
	f	%	f	%	f	%	f	%	f	%	
Employee Job performance enhances effective implementation of e-procurement	32	47.8%	26	38.8%	8	11.9%	1	1.5%	0	0%	4.33
Employees are trained regularly to constantly update their I.T skills	27	40.3%	32	47.8%	8	11.9%	0	0%	0	0%	4.28
Employee Job performance enhances effective implementation of e-procurement	21	31.3%	35	52.2%	9	13.4%	2	3.0%	0	0%	4.12
Employee job evaluation enhances effective implementation of e-procurement	18	26.9%	27	40.3%	19	28.4%	3	4.5%	0	0%	3.90
Employees are competent with e-procurement practices	11	16.4%	32	47.8%	22	32.8%	2	3.0%	0	0%	3.78
Average											4.082

Source: Author (2017)

Results indicate that most of the respondents agreed that employee competence affects the implementation of e-procurement in their supermarkets. This was indicated by an average mean score of 4.082. Most of them agreed that Employee Job performance enhances effective implementation of e-procurement (4.33), followed by Employees are trained regularly to constantly update their I.T skills (4.28), then Employee Job performance enhances effective implementation of e-procurement (4.12), then Employee job evaluation enhances effective implementation of e-procurement (3.90) and finally that employees are competent with e-procurement practices (3.78).

4.4.2 Cost of Implementation on Effective Implementation of E-Procurement of Supermarkets

The study also sought to investigate the effect of cost of implementation on the effective implementation of e-procurement.

Table 4. 5 Cost of Implementation on Effective Implementation of E-Procurement of Supermarkets

Questions	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean
	f	%	f	%	f	%	f	%	f	%	
Costs of maintenance of e-procurement systems is high	35	52.2%	24	35.8%	8	11.9%	0	0%	0	0%	4.40
More time is allocated to implementing e-procurement	32	47.8%	30	44.8%	5	7.5%	0	0%	0	0%	4.40
The costs the company allocates for expertise is high	30	44.8%	32	47.8%	5	7.5%	0	0%	0	0%	4.37
Costs of updates of e-procurement systems are high	32	47.8%	28	41.8%	7	10.4%	0	0%	0	0%	4.37
Costs of updates of e-procurement systems are high	30	44.8%	27	40.3%	10	14.9%	0	0%	0	0%	4.30
Licensing costs for installing e-procurement systems are high	20	29.9%	38	56.7%	9	13.4%	0	0%	0	0%	4.16
System testing takes longer than required hence increasing costs	7	10.4%	28	41.8%	32	47.8%	0	0%	0	0%	3.63
Average											4.232

Source: Author (2017)

An average mean score of 4.32 indicates that majority of the respondents agreed that indeed the cost of implementation affects the effective implantation of e-procurement in Supermarkets in Nairobi and its environs. Most agreed that costs of maintenance of e-procurement systems is high (4.40), that costs of updates of e-procurement systems are high (4.40), that more time is allocated to implementing e-procurement (4.37), that licensing costs for installing e-procurement systems are high (4.37), that the costs the company allocates for expertise is high (4.37), and that system testing takes longer than required hence increasing costs (3.63). An increase in all these costs affects the effective implementation of e-procurement.

4.4.3 Management Involvement on Effective Implementation of E-Procurement of Supermarkets

Management involvement is key as far as the implementation of e-procurement is concerned. This study investigated how it affects the field of supermarkets. Results obtained from the respondents are as described in Table 4.6.

Table 4. 6 Management Involvement on Effective Implementation of E-Procurement of Supermarkets

Question	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean
	f	%	f	%	f	%	f	%	f	%	
Top managements freely delegates to lower management level on issues of e-procurement	38	56.7%	27	40.3%	2	3.0%	0	0%	0	0%	4.54
Top management rewards employees who excel in e-procurement practices	34	50.7%	31	46.3%	2	3.0%	0	0%	0	0%	4.48
Top management is ready to spend on training employees on e-procurement	36	53.7%	23	34.3%	8	11.9%	0	0%	0	0%	4.42
Top management includes the lower level management in making e-procurement decisions	31	46.3%	30	44.8%	6	9%	0	0%	0	0%	4.37
Top management is participative	16	23.9%	35	52.2%	16	23.9%	0	0%	0	0%	4.00
Average											4.362

Source: Author (2017)

Based on the following interpretation key 1-1.49 = Strongly Disagree; 1.5-2.49 = Disagree; 2.5-3.49 = Neutral; 3.5-4.49 = Agree; 4.5-5 = Strongly Agree, an average mean score of 4.32 implies that majority of the respondents agreed that top management involvement affects the effective implementation of e-procurement in supermarkets. They agreed that top managements freely delegates to lower management level on issues of e-procurement (4.54), that top management rewards employees who excel in e-procurement practices (4.48), that top management is ready to spend on training employees on e-procurement (4.42), that top

management includes the lower level management in making e-procurement decisions (4.37) and finally that top management is participative (4.00).

4.4.4 Level of Management Commitment on Effective Implementation of E-Procurement of Supermarkets

Finally, the study sought to find out the effect of Level of Management Commitment on Implementation of e-procurement. Table 4.7 presents the results.

Table 4. 7 Level of Management Commitment on Effective Implementation of E-Procurement of Supermarkets

Question	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean
	f	%	f	%	f	%	f	%	f	%	
Managers are committed to periodically improving the employees skills in e-procurement areas	44	65.7%	19	28.4%	4	6.0%	0	0%	0	0%	4.60
Managers share openly the goals of e-procurement with employees	36	53.7%	29	43.3%	2	3.0%	0	0%	0	0%	4.51
Managers are committed to monitoring employee progress in e-procurement activities	34	50.7%	27	40.3%	6	9.0%	0	0%	0	0%	4.42
Managers fully support employees in their bid to work with e-procurement areas	33	49.3%	27	40.3%	7	10.4%	0	0%	0	0%	4.39
Management approves enough expenditure for e-procurement costs	28	41.8%	30	44.8%	9	13.4%	0	0%	0	0%	4.28
Average											4.44

Source: Author (2017)

An average of 4.44 implies that the respondents agreed that level of management involvement is critical to the effective implementation of e-procurement in supermarkets. This is because they agreed that managers are committed to periodically improving the employees skills in e-procurement areas (4.60), that managers share openly the goals of e-procurement with employees (4.51), that managers are committed to monitoring employee progress in e-procurement activities (4.42), that managers fully support employees in their bid to work with e-procurement areas (4.39) and finally that management approves enough

expenditure for e-procurement costs (4.28). All these would ease the implementation of e-procurement thus making it effective.

4.5 Regression Analysis Results

Table 4. 8 Coefficient Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.657	.576		4.612	.000
	Employee Competence	.302	.072	.303	4.194	.000
	Cost of Implementation	-.210	.079	.214	-2.658	.003
	Management Involvement	.263	.075	.414	3.509	.001
	Level of Management Commitment	.303	.069	.405	4.391	.000
a. Dependent Variable: Implementation of e-procurement						
Critical t = 1.66827						

Source: Author (2017)

From the coefficient table 4.8, the following regression equation was obtained.

$$Y = 2.657 + 0.302 X_1 - 0.210 X_2 + 0.263 X_3 + 0.303 X_4$$

Where Y= Effective Implementation of e-procurement

X₁= Employee Competence

X₂= Cost of Implementation

X₃= Management Involvement

X₄= Level of Management Commitment

According to the regression line generated above, a constant value for Employee Competence $\beta_1 = 0.302$ implies that holding Cost of Implementation, Management Involvement and Level of Management Commitment constant, a unit increase in Employee Competence will increase Implementation of e-procurement by 30.2%. Coefficient for Cost of Implementation $\beta_2 = -0.210$ implies that holding Employee Competence, Management Involvement and Level of

Management Commitment constant, a unit increase in Cost of Implementation will decrease Implementation of e-procurement by 21%. Additionally, coefficient for Management Involvement $\beta_3 = 0.263$ implies that holding Employee Competence, Cost of Implementation and Level of Management Commitment constant, a unit increase in Management Involvement will increase Implementation of e-procurement by 26.3%. Finally, coefficient for Level of Management Commitment $\beta_4 = 0.303$ implies that holding Employee Competence, Cost of Implementation and Management Involvement constant, a unit increase in Level of Management Commitment will increase Implementation of e-procurement by 30.3%.

Generally therefore, level of management commitment (30.3%) has the highest effect on the implementation of e-procurement in supermarkets in Nairobi and Its Environs, followed by employee competence (30.2%), then management involvement (26.3%) and finally implementation costs at 21%.

The next table is the model summary Table;

Table 4. 9 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.696 ^a	.485	.457	.16244
a. Predictors: (Constant), Level of Management Commitment, Management Involvement, Cost of Implementation, Employee Competence				

Source: Author (2017)

The model summary Table 4.9 indicates an R-Square of 0.485 which implies that 48.5% of the independent variable, which were Level of Management Commitment, Management Involvement, Cost of Implementation and Employee Competence explained the independent variable, which was Implementation of e-procurement.

4.6 Diagnostic Test Results

The study's diagnostic test results were presented in this section.

4.6.1 RESET Test Results

The study employed ANOVA test to test the significance of the regression line and whether any variables were omitted. This test was an F test.

Table 4. 10 ANOVA Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.431	4	.108	4.083	.005 ^b
	Residual	1.636	62	.026		
	Total	2.067	66			
a. Dependent Variable: Implementation of e-procurement						
b. Predictors: (Constant), Level of Management Commitment, Management Involvement, Cost of Implementation, Employee Competence						
Critical F= 2.5201						

Source: Author (2017)

Finally, the ANOVA table 4.13 was used to check for any omitted variables or irrelevant variables. This test indicates a statistically significant F calculated value of 4.083 because it is less than Critical value = 2.5201. The significance of this is that the regression equation generated by the study predicts the dependent variable significantly well as indicated by a p value of $p = 0.005 < 0.05$.

4.6.2 Heteroscedasticity Test Results

The Breusch-Pagan Test for heteroscedasticity was also used to check that there is a constant variance in the fitted variables. Table 4.13 indicates a p value of 0.079 > 0.05 which means that the study failed to reject null hypothesis and so this implies that heteroscedasticity is not present.

Table 4. 11 Breusch-Pagan test statistics and sig-values

	LM	Sig
BP	1.248	.079

Source: Author (2017)

4.6.3 Variance Inflation Factor Results

Finally, VIF tests were conducted to estimate how much the variance of the study's regression coefficient is inflated due to multicollinearity in the model. A VIF value of 5.0 and above indicates high levels of collinearity (Cohen, Cohen, West and Aiken, 2013).

Table 4. 12 VIF test results

Variable	VIF
Employee Competence	1.089
Cost of Implementation	1.006
Management Involvement	1.092
Level of Management Commitment	1.003

Source: Author (2017)

Since the variance inflation factor of Employee Competence was 1.089, Cost of Implementation 1.006, Management Involvement 1.092 and Level of Management Commitment had 1.003, then this meant that the standard error for the coefficient of these predictor variables is (Sq. root of 1.089) =1.04, (Sq. root of 1.006) =1.002, (Sq. root of 1.092) =1.044 (Sq. root of 1.003) = 1.001 times as large as it would be if the respective predictor variables were uncorrelated with the others. Additionally, since all these VIF values are less than 5, then there was low levels of multicollinearity.

4.7 Hypothesis Testing

This section presents the results of the hypothesis testing that was carried out by the study.

4.7.1 *Employee Competence has no significant Effect on Implementation of E-procurement in Supermarkets in Nairobi and its environs.*

The first null hypothesis was that Employee competence has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

The Alpha level chosen is 0.05, to imply a 95% confidence level.

Test Statistic obtained from regression is $t = 4.194$ (See Table 4.8)

Critical Test Statistic obtained from statistical tables was $t_{(59, 0.05)} = 1.66827$ (See Table 4.8)

Since Test statistic $t = 4.194 > \text{Critical statistic} = 1.66827$ (See Table 4.8), then reject the null hypothesis. ($p = 0.000 < 0.05$). This implies that Employee competence has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. The study therefore found that for supermarkets that have a higher level of employee competence, their implementation of e-procurement is much more significant to their supply chain performance compared to supermarkets with a relatively low level of employee competence.

4.7.2 Cost of Implementation has no Significant Effect on Implementation of E-Procurement in Supermarkets in Nairobi and its environs.

The second null hypothesis was that the Cost of implementation has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

Similarly, an alpha level of 0.05 implied a 95% confidence level.

Taking the absolute Test Statistic from regression coefficient table to be $t = 2.658$ (See Table 4.8) and comparing it to critical Statistic $t_{(59, 0.05)} = 1.66827$ (See Table 4.8), the following conclusion was made.

Since Test statistic $t = 2.658 > \text{Critical statistic} = 1.66827$ (See Table 4.8) then reject the null hypothesis. ($p = 0.003 < 0.05$). This implies that Cost of implementation has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. This therefore means that an increase in the expenditure on the implementation of eProcurement, the higher the cost, thus this will affect the effectiveness with which the system serves the supermarket altogether.

4.7.3 Management Involvement has no Significant Effect on Implementation of E-procurement in Supermarkets in Nairobi and its environs.

The third null hypothesis was that Management involvement has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

The alpha level chosen was 0.05 (95% confidence level)

Test Statistic obtained from regression coefficients is $t = 3.509$ (See Table 4.8) while critical Statistic from statistical tables was $t_{(59, 0.05)} = 1.66827$ (See Table 4.8)

Since Test statistic $t = 3.509 >$ Critical statistic $= 1.66827$ (See Table 4.8), then reject the null hypothesis. ($p = 0.001 < 0.05$). This implies that Management involvement has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. As such, a supermarket that involves its management in the implementation of eProcurement stands a higher chance of being effective as opposed to one that does not.

4.7.4 Level of Management Commitment has no Significant Effect on Implementation of E-procurement in Supermarkets in Nairobi and its environs.

Finally, the last null hypothesis was that Level of management commitment has no significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs.

Similarly, the alpha level tested remains the same at 0.05 or 95% confidence level

Test Statistic obtained from regression equation was $t = 4.391$ (See Table 4.8) and Critical Statistic obtained from statistical tables was $t_{(59, 0.05)} = 1.66827$, (See Table 4.8)

Since Test statistic $t = 6.343$, Critical statistic $= 1.66827$ (See Table 4.8), then reject the null hypothesis. ($p = 0.000 < 0.05$). This implies that Level of management commitment has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. This shows that management commitment is key towards making sure that eProcurement systems function effectively in a given supermarket.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusions, recommendations, limitations of the study and suggestions for further study.

5.2 Summary of Findings

The study was set to investigate the factors affecting the effective implementation of e-procurement in supermarkets' supply chain management in Nairobi and its environs, Kenya. The researcher identified four key factors namely employee competence, cost of implementation, management involvement and the level of management commitment as the four main factors. These therefore were the objectives sought by the study. A descriptive research design was adopted and the target population identified as major supermarkets in Nairobi and its environs. Questionnaires were the instrument of data collection which was later analyzed with the help of SPSS version 22. The findings revealed the following.

5.2.1 Employee Competence on Effective Implementation of E-Procurement

From the descriptive results, the study found that most of the respondents agreed that employee competence affects the implementation of e-procurement in their supermarkets. This was indicated by an average mean score of 4.082. Most of them agreed that Employee Job performance enhances effective implementation of e-procurement, followed by Employees are trained regularly to constantly update their I.T skills, then Employee Job performance enhances effective implementation of e-procurement, then Employee job evaluation enhances effective implementation of e-procurement and finally that employees are competent with e-procurement practices. Regression analysis on the other hand further revealed a coefficient value for Employee Competence as 0.302, which implied that holding

Cost of Implementation, Management Involvement and Level of Management Commitment constant, a unit increase in Employee Competence will increase Implementation of e-procurement by 0.302 units. Finally, hypothesis tests confirmed this finding by proving that indeed employee competence has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. These findings are similar to what Makali (2015) found in her study on E-procurement and procurement performance of supermarkets in Nairobi. This study asserted that employees need to be competent so as to ensure an optimal adoption process of e-procurement in these supermarkets. Also, while studying an organization's overall supply chain performance, Spense and Spenser (2008) came to a similar conclusion that employee competence is key to the overall performance of any given organization. Muturu (2016) also studied Sustainable procurement strategies and supply chain performance of Five-Star hotels in Nairobi County, Kenya and revealed a near perfect positive relationship between employee competence and supply chain performance. Also while studying Extent of Adoption of Information Communication Technology in Supply Chain Management among Supermarkets in Kenya, Kiura (2012) found similar results.

5.2.2 Cost of Implementation on Effective Implementation of E-Procurement of Supermarkets

Regarding this objective, descriptive results indicated an average mean score of 4.32, which implied that majority of the respondents agreed that costs of maintenance of e-procurement systems is high, that costs of updates of e-procurement systems are high, that more time is allocated to implementing e-procurement, that licensing costs for installing e-procurement systems are high, that the costs the company allocates for expertise is high, and that system testing takes longer than required hence increasing costs. An increase in all these costs negatively affects the effective implementation of e-procurement. This was confirmed by regression analysis tests which revealed a coefficient for Cost of Implementation as -0.210,

which implied that holding Employee Competence, Management Involvement and Level of Management Commitment constant, a unit increase in Cost of Implementation will decrease Implementation of e-procurement by 0.210 units. Finally, hypothesis tests proved that this implies that Cost of implementation has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. Ratanya (2013) in her study on E-procurement implementation and supply chain integration among large scale manufacturing firms in Nairobi, Kenya also established that costs is a key constraint to the implementation of e-procurement among manufacturing firms. Rotich (2014), who sought to identify the Dynamic procurement practices and supply chain performance of supermarkets in Nairobi, Kenya also found a negative relationship between cost and supply chain performance. He stated that the implementation of e-procurement often comes at a cost which eventually affects the performance of the entire organization.

5.2.3 Management Involvement on Effective Implementation of E-Procurement of Supermarkets

Additionally, based on the descriptive statistics, an average mean score of 4.32 was revealed for the effect of Management Involvement on Effective Implementation of E-Procurement of Supermarkets. This implied that majority of the respondents agreed that top managements freely delegates to lower management level on issues of e-procurement, that top management rewards employees who excel in e-procurement practices, that top management is ready to spend on training employees on e-procurement, that top management includes the lower level management in making e-procurement decisions and finally that top management is participative. Similarly, regression analysis revealed a coefficient for Management Involvement to be 0.263. This implied that holding Employee Competence, Cost of Implementation and level of management commitment constant, a unit increase in Management Involvement will increase Implementation of e-procurement by 0.263 units.

Hypothesis tests revealed that management involvement has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. King'ori (2013) also came to the same conclusion in his study on the effect of e-procurement on supply chain management at teachers' service commission. Another study conducted by Keana (2015) on automated procurement systems and performance of supermarkets in Nairobi revealed that majority of supermarkets relied on their management involvement as far as the implementation of eProcurement practices was concerned. The study revealed that indeed, managerial involvement is critical as it found a positive and significant relationship between the two. Khan and Igbal, (2016) also agreed with these sentiments. Kitheka (2012) also conducted a study on Inventory management automation and the performance of supermarkets in western Kenya and found similar results. Finally Nzuve, (2013) in his study on the implementation of e-procurement practices among private hospitals in Nairobi, Kenya, also found a similar result.

5.2.4 Level of Management Commitment on Effective Implementation of E-Procurement of Supermarkets

Finally, an average of 4.44 implied that the respondents agreed that level of management involvement is critical to the effective implementation of e-procurement in supermarkets. This is because they agreed that managers are committed to periodically improving the employees skills in e-procurement areas, that managers share openly the goals of e-procurement with employees, that managers are committed to monitoring employee progress in e-procurement activities, that managers fully support employees in their bid to work with e-procurement areas and finally that management approves enough expenditure for e-procurement costs. Regression analysis also revealed a coefficient for Level of Management Commitment of 0.303, which implied that holding Employee Competence, Cost of Implementation and Management Involvement constant, a unit increase in Level of

Management Commitment will increase Implementation of e-procurement by 0.303 units. Also, hypothesis tests confirmed that Level of management commitment has a significant effect on implementation of e-procurement in Supermarkets in Nairobi and its environs. While studying Information Communication Technology Adoption and Supply Chain Performance of Parastatals in the Kenya's Energy Sector Mwangi (2016) equally came to the conclusion that management commitment is key to implementing e-procurement. Tuazama (2015) also found a similar result while conducting a research on Supply chain management practices and organizational performance of supermarkets in Nairobi. Similarly, setbacks Oropesa, Del Risco, Perez and Lara, (2016) concluded in their study that without management commitment, then the implementation of e-procurement practices in most organizations, supermarkets included, will be very difficult. Oporo (2014) also studied Factors influencing e-procurement application at Kenya revenue authority and found similar results.

5.3 Conclusions

Based on the results from the analysis of data, this study concluded that the four main factors that affect the effective implementation of e-procurement include employee competence, implementation costs, management involvement and finally the level of management commitment. Employee competence is critical as far as Job performance and evaluation, training, recruitment and having a succession plan for the most competent employees is concerned. Keeping all these in mind will most definitely increase the effective implementation of e-procurement practices. Secondly, the study concluded that an increase in the costs of implementation associated with maintenance, planning, updating, allocating time, licensing, installing and system testing will reduce the effectiveness of implementing e-procurement. The study also concluded that managerial involvement is key to effectively implementing e-procurement systems in supermarkets. Finally, the study also concludes that

a higher level of management involvement means that employees will have a clear sense of focus and know the supermarket's priorities, goals and objectives will displayed publicly, achievers will be recognized by top management, there will be a program to monitor and evaluate progress of goals and objectives and finally managers will be able to coordinate employees actions.

5.4 Recommendations

Based on the conclusions, the study first recommends Supermarkets to ensure that their employees are competent. This will be achieved by making sure that Job performance and evaluation are carried out on them, that they are trained regularly, that recruitment is based on merit, that there is a succession plan for the most competent and that they are competent with e-procurement practices. It is also recommended that the cost of implementing e-procurement should be reduced as much as possible. This regards maintenance, planning, updating, allocating time, licensing, installing and system testing. Finally, top management commitment also improves the effective implementation of e-procurement. This is because through it, employees will have a clear sense of focus and know the supermarket's priorities, goals and objectives will displayed publicly, achievers will be recognized by top management, there will be a program to monitor and evaluate progress of goals and objectives and finally managers will be able to coordinate employees actions.

5.5 Limitations of the Study

This section presents the limitations as identified by the researcher during the execution of the study. First, the respondents had busy working schedules in their organizations which derailed the process of data collection. The researcher however tackled this limitation by emphasizing to the respondents that the data was needed urgently in order to meet the academic deadlines.

Some respondents were reluctant to answer the questionnaires presented to them, citing confidentiality of company information. The researcher handled this limitation by making it clear to them that this research was mainly for academic purposes, and that the information required to be filled would not compromise their companies in any way. Finally, the accuracy of the data collected was mainly dependent on what was provided by the respondents from the manufacturing firms. As such, there was need for the respondents to answer the questions honestly and accurately. The researcher therefore handled this limitation from answering the respondents' queries on the questions that the respondents didn't understand.

5.6 Area for Further Research

This study sought to identify the factors that affect the effective implementation of e-procurement in Supermarkets in Nairobi and Its Environs. The researcher recommends further studies to be conducted on the effectiveness of the implementation of e-procurement on other sectors such as the manufacturing industry. Studies that consider other factors should also be conducted.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION

The following section contains questions that seek to gather demographic information about yourself and your company. Please tick as appropriate in the boxes using a tick or cross mark.

1. Gender

Male Female

2. Age Bracket in years

20-25 26-30

31-35 36-40

41 -50 51 and Above

3. Highest level of education

a) Undergraduate Level b) Post-Graduate Level

c) Post Graduate Level

Any other (Specify)

4. Kindly indicate your supermarket by ticking in the space provided.

Item	Supermarket	Tick	Item		Tick
1	Chandarana Supermarkets		14	Ng'ororgaa Supermarkets	
2	Wagon Shopping Limited		15	PakMatt Supermarket	
3	Cleanshelf Supermarkets		16	Quickmart Supermarkets	
4	Eastmatt Supermarkets		17	Rikana Supermarkets	
5	G-Mart Supermarkets		18	Selfridges Supermarkets	
6	Jaharis Supermarkets		19	Society Stores Supermarkets	
7	JD's Supermarket		20	StageMatt Supermarket	
8	Karrymatt Supermarkets		21	Suntec Supermarkets Ltd (Just Homes Limited)	
9	Kassmart Supermarkets		22	Tumaini Supermarkets	
10	Maathai Supermarkets		23	Tuskys	
11	Maguna Andu Supermarkets		24	Uchumi Supermarkets	
12	Naivas Limited		25	Ukwala Supermarkets	
13	Nakumatt				

SECTION B: FACTORS THAT AFFECT THE IMPLEMENTATION OF E PROCUREMENT

This section has statements regarding the factors that affect the implementation of e procurement in your supermarket. Kindly respond with the response that matches you opinion. Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

a) Employee Competence and Effective Implementation of E-procurement

Tick as appropriate using the following Likert scale of 1-5 where: 1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5=Strongly Agree

	Statement	1	2	3	4	5
5	Employees competently employ e-procurement practices					
6	Employees possess the required IT skills to use in e- procurement					
7	Employees are trained regularly to constantly update their I.T skills					
8	Employee Job performance enhances effective implementation of e-procurement					
9	Employee job evaluation enhances effective implementation of e-procurement					

b) Cost of Implementation

Tick as appropriate using the following Likert scale of 1-5 where: 1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5=Strongly Agree

	Statement	1	2	3	4	5
10	More time is allocated to implementing e-procurement					
11	Licensing costs for installing e- procurement systems are high					
12	The costs the company allocates for expertise is high					
13	Costs of updates of e-procurement systems are high					
14	Costs of maintenance of e-procurement systems is high					
15	Planning takes longer than required hence increasing costs					
16	System testing takes longer than required hence increasing costs					

c) Management Involvement

Tick as appropriate using the following Likert scale of 1-5 where: 1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5=Strongly Agree

	Statement	1	2	3	4	5
17	Top management is participative					

18	Top management includes the lower level management in making e-procurement decisions					
19	Top managements freely delegates to lower management level on issues of e-procurement					
20	Top management is ready to spend on training employees on e-procurement					
21	Top management rewards employees who excel in e-procurement practices					

d) Management Commitment

Tick as appropriate using the following Likert scale of 1-5 where: 1= Strongly Disagree; 2= Disagree; 3= Neutral; 4= Agree; 5=Strongly Agree

	Statement	1	2	3	4	5
22	Management approves enough expenditure for e-procurement costs					
23	Managers fully support employees in their bid to work with e-procurement areas					
24	Managers share openly the goals of e-procurement with employees					
25	Managers are committed to monitoring employee progress in e-procurement activities					
26	Managers are committed to periodically improving the employees skills in e-procurement areas					

SECTION C: SUPPLY CHAIN MANAGEMENT

This section has statements regarding supply chain management in your supermarket. Kindly respond with the response that matches you opinion. Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

	Statement	1	2	3	4	5
27	Supply chain management highly benefits from employee upgrade of e-procurement skills					
28	Supply chain management is greatly improved as a result of the level of expenditure on e-procurement					
29	Supply chain management is efficient due to increased management commitment					
30	Supply chain management is greatly enhanced by the top management commitment					
31	E-Procurement leads to reduced costs per transaction					

32	Internal customers can obtain the items they want from a catalogue of approved items					
33	E-Procurement eliminates paper work that contributes to environmental pollution					
34	E procurement ensures higher productivity					
35	Requirements are clarified by the use of product catalogues					

Thank You

APPENDIX II: LIST OF SUPERMARKETS IN NAIROBI AND ITS ENVIRONS

Item	Supermarket	Location
1	Chandarana Supermarkets	Ngara
2	Cleanshelf Supermarkets	CBD
3	Eastmatt Supermarkets	CBD
4	G-Mart Supermarkets	CBD
5	Jaharis Supermarkets	CBD
6	JD's Supermarket	CBD
7	Karrymatt Supermarkets	CBD
8	Kassmart Supermarkets	Kasarani
9	Maathai Supermarkets	CBD
10	Maguna Andu Supermarkets	CBD
11	Naivas Limited	CBD
12	Nakumatt	CBD
13	Ng'ororgaa Supermarkets	Ngara
14	PakMatt Supermarket	Parklands
15	Quickmart Supermarkets	CBD
16	Rikana Supermarkets	CBD
17	Selfridges Supermarkets	CBD
18	Society Stores Supermarkets	CBD
19	StageMatt Supermarket	CBD
20	Suntec Supermarkets Ltd (Just Homes Limited)	CBD
21	Tumaini Supermarkets	CBD
22	Tuskys	CBD

23	Uchumi Supermarkets	CBD
24	Ukwala Supermarkets	CBD
25	Wagon Shopping Limited	CBD