EFFECT OF INTERNET-BASED TECHNOLOGY ON THE PERFORMANCE OF RETAIL INDUSTRY IN KENYA: A CASE STUDY OF CARREFOUR SUPERMARKETS IN NAIROBI

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AUGUST, 2018
DECLARATON
This is my original work and has not been submitted for any degree in any other University or college other than The Management University of Africa (MUA) for academic credit.

Signed………………………… Date……………………………………
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BML/00163/3/2012

SUPERVISOR
This work has been presented for examination purposes with my approval as the University supervisor appointed.

Signed………………………… Date……………………………………
Dr. Emmanuel Awuor.
DEDICATION

This research is dedicated to my mother Esther Ndunge, my aunt Peris Machera, and my grandparents and to the entire MUA family.
ACKNOWLEDGEMENT
It is with pleasure that I would like to thank the Almighty God for the strength. I wish to express my gratitude to my supervisor, Dr. Emmanuel Awuor for his professional guidance and advice while writing this proposal. I wish to acknowledge his generosity with his time while discussing the proposal. I would also like to acknowledge my family for their support towards my academic achievements. I would also like to acknowledge my colleagues who have given me both moral and academic support. Finally, I would like to acknowledge the entire MUA family for having accepted me to be part of them.
ABSTRACT

The aim of this study was to establish the effect of internet based technology in the performance of the retail industry for supermarkets in Kenya specifically the small and medium sized enterprises. It pursued answers on the following research questions. How does Internet based technology affect the speed in order processing, how does the efficiency of Internet based technology affect the accuracy in order processing, how do the Kenyan supermarkets view Internet based technology as an alternative procurement platform and what is the implication of internet-based technology on cost of operations? With an aim of illustrating how internet based technology can increase the competitive advantage position of these supermarkets in Kenya, especially with the threat of new rivals increasing. Explanatory research design was used in the study as it aim was to unveil the effect that Internet based technology has on the SME’s specifically supermarkets in Kenya. It was conducted by use of questionnaires consisting both closed and open ended questions. The reference public was drawn from supermarkets in Nairobi County. The sample was selected from thirty two respondents from four supermarkets within Nairobi County. This data was analyzed using tables. The study observed the ICT process to influence ICT applications in these supermarkets to a huge extent. This is verified by the honest observation that majority of the respondents indicated that the ICT process influences ICT applications in these supermarkets to a great extent. The respondents strongly concurred that E-Retail opportunities existed by using ICT software but their supermarkets have not yet acquired means to acquire opportunities. However, in the study it was also observed that even the retailers have faced various challenges in their enterprises, therefore contributing to software failure. These problems include the system not matching the sales and inventory during transactions, thus its difficult identifying inventory shortage and false activities and workers have to keep double checking inventory manually. This in return increases inventory costs, labour costs and stock ordering that are done manually. Also there are high costs of setting up the electronic retail portal and long uploading sessions as well as having stock for customers readily available. This has frustrated the adoption of ICT solutions within the supermarkets. Respondents agreed that the Use of ICT Applications increased efficiency of ICT processes to a great extent.
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# ABBREVIATIONS AND ACRONYMS

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<tr>
<td>PPOA</td>
<td>Public Procurement Oversight Authority</td>
</tr>
<tr>
<td>IFMIS</td>
<td>Integrated Financial Management Information System</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication technology</td>
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<tr>
<td>SPMS</td>
<td>Strategic Performance Measurement System</td>
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<td>KPI</td>
<td>Key Performance Indicators</td>
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<td>PPDA</td>
<td>Public Procurement and Disposal Act</td>
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CHAPTER ONE
INTRODUCTION
1.0 Background of the study

Few years back the introduction of e-procurement in Kenya was being hailed as a big success. Like many other countries in Africa and indeed other parts of the world, corruption has been a major problem in public procurement, and the introduction of e-procurement was seen as one way of countering this. The system included for instance built-in price referencing, so bids that were above a benchmark could not be accepted.

E-commerce can help especially because it offers provision of a clear audit test for bidding and supplier selection. Everything is documented and it is easy to see which suppliers have bid and what they have bid. Aspects such as ensuring bids are “opened” at the same time can be managed more easily than with manual processes. However, it appears that all is not well now with the system in Kenya, and the leaders of 47 counties within the country have suggested the system should be suspended. The governors have identified a number of problems with the system. It has “recentralised procurement and contributed to marginalisation of locals in tendering.” Enterprises that have no access to ICT solutions cannot participate in the supplier selection and contracting process at county level.

There have also been problems with malfunctioning of the system, to the point where counties have been unable to promptly pay bills to suppliers, causing problems for those firms and creating a crisis of confidence in the process. There are also issues with the infrastructure that is needed to support electronic procurement. In some cases, the system has had very limited availability – “one county was allowed to access the system for two hours only in two weeks.”

Now some observers see this as a push-back against the anti-corruption aspect of the system. But the government does need to show that it is doing everything possible to make this a success, and these do seem to be fundamental issues. But what can we learn from this that might be relevant to contracting authorities and governments
An essential observation to note is that the point is not just to acquire a system. It is (as we mathematicians like to say) a necessary condition for achieving reliable e-procurement. So whatever happens next in Kenya, we can see that having the technical infrastructure for e-procurement is vital. A reliable Internet service that can be accessed reliably by the supply market is essential if this is to work well.

Then, we need a supply market that is sophisticated enough to use e-procurement. It is not enough to have a system and Internet connections – your suppliers should understand their way around the system as well as put it to good use. The particular risk identified now in Kenya is that the smaller, local suppliers will lose out, because they are the potential suppliers who do not have the equipment, knowledge or resources to access the system. Given that virtually every government and contracting authority wants to promote local business, and small, dynamic, innovative firms, then this is critical.

As well as the market, you must have capability and capacity amongst the staff that are going to operate the e-procurement system and process. That appears to be another issue in Kenya, and really is a failing of the center if that is the case. Training must be the responsibility of the software owner as it was the central government in this case. Apart from pre purchase activities, such as participation in the preparation of specifications and budget decisions, procurement traditionally involved three main stages, each requiring precise documents and a considerable transactional activity. The identification phase notifies of the need to purchase by either: a bill of materials or a requisition issued by the purchasing office, production control or equivalent department. The ordering phase occurs where materials having being received were checked by the buyer for accuracy, to specifications and receipts to confirm whether the purchase is a ‘rebuy’ or a new buy request.

If the item is a standard ‘rebuy’ request for an item that was previously purchased from a satisfactory supplier at an affordable cost, a repeat order could be issued. If however, the product is a new buy: requests for requisition would be sent to possible
suppliers accompanied by additional documents which would enable them to submit a quotation; quotations would be received in response to enquiries and terms of business compared. If quantities are substantial and shipment a major deal, additional negotiation with stockists would be required. A purchase order was issued to the supplier that gave the quotation.

Finally an order acknowledgement would be required from the vendor, examined and accepted on terms and conditions defined between parties. Last phase is post ordering phase, where it’s important to accelerate the progress of the order to ensure that delivery dates would be met, a note notifying that the materials are ready for collection or dispatch. On receipt, the goods were checked for quantity by stores and inspection department where matters of quality or specification were involved, if satisfactory a goods received note will be completed and sent back to the purchasing department. A receipt for the value of goods will be received from the supplier. This is compared to the purchase order and goods received note.

When satisfactory, the bill of materials would be passed to the accounts department for payment. On completion the order is transferred to a complete orders file. Inefficiencies of traditional procedures are also present. These include excessive cost of purely transactional activities, delayed time in processing orders both externally and internally as well as a sequence of clerical activities that do not add value. It’s because of such inefficiencies that many organisations are with time recognizing that formal paperwork often serves merely to record a logistical trail.

Leading-edge purchasing enterprises require changing this imperative purpose into value added processes by cutting down, doing away or putting together steps whenever possible. All these enterprises are therefore being forced to embrace the strategic impact of IT and e-procurement. Some writers use the generic ‘e-supply strategy to refer to any initiative by which an organisation adopts an internet software application to assist with the management of procurement, logistics or supply chain activities, whether it is for many or single applications.
1.2 Problem Statement

Both positive and negative impacts are being faced by the Kenyan supermarkets as a result of application of internet-based technology. Some of the positive impacts as already been mentioned are very helpful, however some impacts have caused stiff competitions and closure of some businesses especially those which are not able to cope up with the growing and changing trends in commerce (MacLean, 2004). Internet based technology has both optimistic and pessimistic indications including but at the same time not limited to installation costs, cybercrimes without proper establishment of the motive behind all persons involved in the retail type of business where supermarkets fall. A study by Jesse (2013) notes that currently almost a half of the Kenyan retail business use internet-based technology in transacting their trading activities. The biggest hiccup is in the fact that those who have not adopted technology are at a greater risk to do with the implied nature of trading which makes it less competitive in the retail industry

Regardless of the recognition of the value of Internet-based technology application in the Kenyan retail businesses, it is clear that from the study of Joshua, Agnes and Isaac (2013) that the adoption of Internet-based technology is still low. As a result of this background, the study sought to establish the underlying impact of Internet-based technology in selected Kenyan supermarkets.

1.3 Purpose of the study

The purpose of this study was to finding the effect of ICT on the Kenyan supermarkets.

1.4 Research Objectives

To establish to which extent, the speed of order processing affects the performance of retail industry in Kenya.

To determine how the accuracy of Order Processing affects performance of retail industry in Kenya.
To establish how procurement audit affects performance of retail Industry in Kenya.

To determine cost of operations affects performance of retail industry in Kenya.

1.5 Significance of Study

1.5.1 To the Management

The study will assist the management in understanding as well as appreciating the effect of internet-based technology on core business planning in the enterprise. It will also enable them to embrace and take up apt strategies in order to keep up with the dynamic digital trends and culture amidst competitors who are a threat to the business. The findings of the study will point out the essence of other retailers in other industries mostly with the increased levels of smart phone ownership traffic jam and globalization. This will cause motivation to them leading them to embrace and effectively implement competitive business strategies.

1.5.2 To the Academicians and Researchers

The study will be of value for the reason that the results will be utilized as secondary data to promote studies in future in supporting digitization. The study will also aid individual researchers to establish gaps in the current research and conduct further research in such areas.

1.5.3 To the Retail Sector

The retail sector will benefit from the study in motivating those aspiring entrants into the industry as the study will act as a yardstick to guide them on their intentions to join the industry. The findings shall be of essence for reference for any potential investor intending to penetrate the Kenyan retail sector. As a result, investors shall make a sober decision and promote the economic growth of the country through their investment in the retail industry.

1.6 Scope of the study
The study concentrated on all the four branches of Carrefour supermarkets in Nairobi County. The study aimed at determining the effect on internet-based technology on Kenyan retail sector with a narrower scope of the supermarkets. Findings of this study were used to broaden the knowledge of existing and the would-be supermarkets and the larger retail industry in Kenya; both government-based and non-governmental agencies are mandated with the responsibility of ICT implementation. The population of the study was charged was drawn from Carrefour markets in Nairobi county consisting of two senior management respondents from the procurement, branding, marketing and public relations department. The research study covered the period 2018.

1.7 Chapter Summary

The chapter begins by giving an overview of internet-based technology and its many advantages to businesses globally. With the globalization era, internet-based technology has led to growth of competitiveness in a wide range of industries the retail industry included. Supermarkets in Kenya have not been left untouched and will, at this rate be forced to adopt this technology. Therefore, in an effort for supermarkets to stand out in the market, they need to keep up with the growing trends both locally and globally. There is need to adopt and treat this platform with equal importance as other corporate policies and practices. With the notable multiplication of supermarkets in Kenya, it is imperative that the Carrefour supermarkets work smart and adopt technology to outsmart their competitors.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter profiles the literature review of the research literature on the effect of internet-based technology on Kenyan Supermarkets. Specifically, the chapter discusses the effect of internet-based technology in the operational processes of the selected retail businesses, how efficiency of the internet-based technology affects the performance of these supermarkets in Kenyan retail businesses, how Kenyan supermarkets view internet-based technology as an alternative trading platform. Finally, this chapter outlines the chapter summary.

2.2 Theoretical Literature Review

2.2.1 Transaction Cost Economics (TCE) Theory

The Transaction Cost Economics (TCE) theory argues that the use of ICT will lead to reduced transaction costs associated with the management of transactions (Coase, 1937; Alchian & Demsetz, 1972; Williamson, 1975) and by efficient coordination. Explicitly recognizing the costs of coordination among economic entities in markets, TCE stresses that a firm’s central task is to coordinate transactions efficiently (Williamson, 1985). Information based technology can lower coordination costs, and in logistical contexts, acquired digital integration can essentially improve transactions efficiently through increased data sharing and telecommunications, resulting in improved performance of the supply chain, (Zhu & Kraemer, 2005).

Furthermore, as argued by (Lopez, 2013), ICT resources impact on communication improvement; this includes internal and external communication and coordination of activities and this enables a faster and more efficient use of information both within 12 the firm and with external agents, such as customers and suppliers. TCE sheds light on the role of the digitally enabled supply chain management in competitive environment. An important feature of a competitive environment is the extensive competitive actions in the markets, such as competitive entry, price change, supplier alliances, and new product
introduction (Ferrier, 2001). To improve performance or even survive in competitive environments, a firm needs to adapt its businesses to respond to competitive actions (Sambamurthy et al, 2003). Whenever a manufacturer’s performance is stirred up by competitors’ actions, it may encounter more needs to integrate with the partner on the other end. If a manufacturing operation in a company is frequently affected by competitors, it may face greater necessity to work closely with partners in the supply chain. For example, a manufacturer that needs to advance the design of their product, because of a new product launched by competitors or them bringing a new product, this also brings the need to modify the design of upstream components that make up the product. These may induce considerable coordination tasks (Bensaou, 1997).

Similarly, studies reveal that state corporations usually spend up to 70% of their revenue/operational budget on purchasing goods and services (Rahim, 2008; Gebauer & Segev, 1998). Despite such significance, procurement function in the public sector still suffers from four protracted hitches: First, traditional procurement process permits infamous maverick buying practice which represents a situation where employees make unplanned purchases from non-preferred suppliers at a higher price (Rahim, 2008; Turban, et al, 2008); second, procurement policies are not well developed and hence adopting the same becomes a serious challenge; third, series of bureaucracy in the procurement process giving rise to poor service delivery; and finally, procurement is traditionally a labor-intensive activity and, as such, managers spend considerable time on ‘non-value-added activities’ (Rahim, 2008; Croom & Brandon, 2005; Roche, 2001).

Should E-procurement be successfully implemented, a significant amount of research has been revised from the private sector accrued from e-procurement. Identified benefits include: enhanced relationships with suppliers; reduced order cycle times; reductions in the cost of placing orders; the stream-lining of the supply-chain, and greater compliance with standards (Subramanian & Shaw, 2004; Croom and Johnston, 2003; Hawking and Stein, 2004). However, it is not just the private sector that is likely to benefit from the adoption of e-procurement capabilities, as there is also the potential for state corporations to gain significantly (Croom & Brandon, 2007). In spite of the challenges that come with public e-procurement, implementation of electronic government projects is found to be
difficult due to the size and nature of government. Besides, procurement process—which includes selecting bidders, evaluating tenders, and selecting contracts—is expected to be transparent to the public (Devadoss, 2003; Mitchell, 2000).

Based on a field study of 26 firms with business operations in Asia, Hsao & Teo (2005) suggested a three-stage model for implementing e-procurement. Although e-procurement has many operational and financial attractions, these can only be realized, if the ground has already been well prepared through the cultivation of facilitators and the elimination of all impediments such as: security breaches; cultural mismatch; non participation by key suppliers; regulatory difficulties (Trkman and McCormack, 2010).

Acceptance of e-procurement systems by employees working in the state corporations is important to ensure improved organizational effectiveness (Subramaniam & Shaw, 2004). Little is known of factors that limit the acceptance of ICT systems by employees in organizations despite the rich literature that exists regarding how organizations can adopt e-procurement systems. As such, the following factors have been identified: perceived usefulness, perceived ease of use, employee involvement, reliability, customized training, vendor support and management support (Rahim, 2008). In the development of Kenya’s economy, public procurement is essential. Its importance has been on the increase since the year 2004 and 2014, where it accounted for 9% and 11% of the GDP, respectively (Kamotho, 2014; Malela, 2010; PPOA, 2007). In the past, there has been a lot of concern that E-procurement has been neglected and as such, the government has not been yielding value for money amongst its state organizations. Major reforms in the procurement system in Kenya started with the establishment of the legal framework within which public procurement could be carried out (Mihezo, 2013).

Thus the Kenyan government has seen the need to improve e-procurement by bringing forth a number of reforms set at enhancing efficiency in the supply chain process. Originally the Kenyan government first supplemented a supplies manual of 1978. The first review came in 1999 and a number of issues that have contributed to poor purchasing and supplies management among corporations of the state. These issues included: lack of uniform procurement system and standard procurement policy; lack of
sanctions or penalties against persons who breached the regulations in the supplies manual; application of the rules was not strict and as such, many of the norms were not followed; there was lack of transparency and accountability in the procurement process thus contributing to huge losses of public funds (Mambo, 2015 and Malela, 2010).

Having learnt from the success stories among state corporations in the global arena, the government of Kenya saw the need to adopt e-procurement amongst its state corporations with the aim of modernizing and enhancing their procurement performance (Kiage, 2013). Additional reviews have led to better technology which has introduced high speed optic fibre cables which was meant to boost the efficiency of the internet thus making e-procurement a reality. Similarly, the integrated financial management information system (IFMIS) was also introduced as a major instrument to bolster e-procurement solution and to improve governance of Ministries and Departments (Miheso, 2013). Up to date ICT solutions have become part of the process of attaining Kenya’s vision 2030 which aims at transforming Kenya from an industrial perspective twelve years from now (2030).

Being one of the medium term objectives which were to be implemented by June 2007, e-procurement adoption among state corporations has been alarmingly very slow (Makau, 2014; Malela, 2010). Studies by Chang, (2011) revealed that in the year 2010, over 60% of Korea’s total public procurement (124 billion USD) was conducted through e-procurement system. This resulted to improved procurement in Korea in terms of higher efficiency in service delivery, low transaction costs, advanced policy compliance as well as short procurement cycle durations. In contrast to this, studies indicate that more than 50% of procurement processes in state corporations in Kenya are still being carried out manually; with the internet only being used for e-mails and web browsing (Malela, 2010; Miheso, 2013; Makau, 2014). Therefore it was important for the establishment of e-procurement adoption on procurement performance to take place in state corporations in the country. With specific reference to Kenyan supermarkets, as a state corporation. As such supermarkets have been the ultimate case study to learn more on e-procurement’s adoption role on the performance of procurement in state corporations in Kenya.
In order to identify the reason behind this, Rogers (2010) discovered the main elements influencing the spread of a new technology, which include: the innovation itself, communication channels, time, and a social system. The referred to fundamentals directly impact the e-procurement adoption success for both buyers and suppliers since it requires the following activities to be conducted: Electronic tender advertisement to public, electronic document transmission to tenderers as well as submissions of the bidding documents. This model’s aim was answering all research questions. Davis’s technology acceptance model (Davis, 1989, Davis, Bagozzi, & Warshaw, 1989) is the most widely applied model of users’ acceptance & usage of technology (Venkatesh, 2000). TAM replaces many TRA’s attitude measures with the two technology acceptance measures—ease of use and usefulness. The model suggests that when users are introduced with a new technology, a number of factors influence their decision, about how and when they will put it to use, distinctly; perceived usefulness, this was defined by Fred Davis as the degree to which a person believes that using a particular system would enhance his/her job performance. Secondly, perceived ease-of-use (PEOU), Davis defined this as “the degree to which a person believes that using a particular system would be free from effort” (Davis 1989).

E-procurement adoption entails changes that include re-engineering the existing system within the organization that will ultimately impact on the way tasks are conducted (Kaliannan et al, 2008). The chapter constitutes theoretical review, conceptual framework, and critique of the existing literature, summary and the research gaps. A literature review was an account of what had been published on a topic by accredited scholars and researchers, a piece of discursive prose (Taylor, 2006) and explaining the intellectual progression of the field including major debates (Anson and Eschweiler, 2000).

The adoption of E-commerce is highly influenced by the level of understanding about the benefits (not only financial, but also non-financial) of E-procurement in a company. If no one is aware of the benefits of E-procurement, there is little incentive to adopt E-procurement. An understanding of the benefits of E-procurement indicates the level of managerial and technological expertise and awareness of new technologies including E-
procurement. The major benefits associated with adoption of E-procurement are real time information, a flawless procurement process and an integrated supply chain. The benefits that can be drawn after implementing E-procurement include improved relationships with suppliers, purchasing effectiveness, reduced inventory carrying costs, better prices and a shorter improved order cycle time.

Maverick buying refers to the purchase of goods and services without using the firms formally defined protocol and authorized vendors. Maverick buying is mostly common an issue that afflicts large manufacturing businesses, and costs millions yearly in wasted time and lost revenue. Essentially maverick buying is when an employee purchases goods without authorization. It is done legally but isn’t in the company’s best interest. This occurs often when the staff is not well informed of the policies of the organization thus leading to lack of awareness. MB always leads to a realization of either a positive or negative impact to the sales of the products from the company. This has resulted to observation on purchasing activities in organizations, which has allowed for the re-organizing of purchasing functions and the search for optimal purchasing processes in separate products and service categories in separate conditions. Most organizations understand that purchasing is a major factor in a supply chain management strategy and the drift has thus been toward a stronger more centralized function and more involvement in the organization’s planning process. The benefits of centralization of purchasing activities include: saving of costs through volume discounts.

The factors such as maverick buying, use of ICT, skills of staff and material management influence the centralization of purchasing activities states that a retailer is any business established that directs its marketing effort towards the final consumer for the purpose of selling goods and services. A retail sale is one that the buyer is an ultimate consumer, as opposed to a business or institutional purchase. Retailers play a crucial role that benefits the consumers, wholesalers as well as the manufacturers.

States that if it were not for retailers consumers would be forced to go from manufacturers to manufacturer to purchase goods that they needed. Retailers perform the basic function of bulk breaking, assorting, storing, informing and serving. According to
Corey (1978), the basis for centralizing purchasing exists when two or more locations have common requirements. For centralization to occur the ability to standardize is a requirement.

According to Arnold (1999) centralization does not necessarily refer to all procurement functions but at least to a centralized supplier management and contract handling. Decentralization purchasing structures can also allow for cost efficiency for example by pushing decision making responsibility closer to the end user. However, some level of centralization might be required to support strategic initiatives of the purchasing organization. The appropriate degree of centralization however depends on the relative costs and benefits of a structural change needed to address the ongoing business challenges (Johnson & Leenders, 2001) affecting the performance of the purchasing function. According to Van Weele (2010), purchasing performance is considered to be the result of two dimensions: effectiveness and efficiency. Secondly, Organizational context; which refers to descriptive measures about the organization such as scope, organization structure, size, financial support, managerial beliefs and managerial structure (Chen, et al, 2006).

The use of ICT refers to the integration of ICT in procurement activities, linking of procurement function with departments and also with supplier organizations. Information communication Technology eliminates costs of overstocking and understocking and the increased efficiency of just-in-time inventory systems. Sharing of data can provide participants with information which enhances the efficiency, flexibility and innovation to respond to the competition of global market. This refers to the skills required by the individuals handling procurement activities in the procurement function to the forwarded responsibility and how its Successful performance depends on ability of the individual handling the task and how well they handle the tasks under that role.

In order to handle and execute procurement tasks effectively, cultural-cognitive pillar rests on common beliefs, symbols and perceptions that together bolster shared understanding (Scott, 2005). Compared to private industry corporations, commercial state corporations have been found to be more vulnerable to institutional forces according to
studies conducted. As such, institutional theory has become a prominent lens through which organizational processes are interpreted and understood (Makau, 2014). This is more pronounced in public procurement especially during open tendering process; which requires government law and policy to be adhered to (Obanda, 2010).

Implementing E-procurement by commercial state corporations in Kenya goes ahead to show that the interests of the nation are at heart when conducting E-procurement activities. These activities include: specification development, tender advert, bid transmission and response submission; tender opening, bid evaluation, contract award and agreement signing; order preparation, order approval, order transmission and acceptance (McConnell, 2009).

### 2.2.2 The Resource Based View (RBV) Theory

Resource based theory commonly referred to as resource based view (RBV) originated from the works of Penrose (1959), who argued that a firm consists of a collection of productive resources’ and these resources may only contribute to a firm’s competitive position to the extent they are exploited with the purpose of adding value to the firm. Rubin (1973) recognized that resources were not of much use by themselves but firms must process raw resources to make them useful.

Barney (2011) argues that the RBV approach has evolved from a nascent, upstart perspective to one of the most prominent and powerful theories for describing, explaining, and predicting organizational relationships. The RBV theory attempts to explain how technology creates value (Zhu & Kraemer 2002, 2005).

The RBV theory attributes improvement in firm performance to valuable resources or resource bundles (Barney 1991, Peteraf 1993). ICT creates value to the firm indirectly as it influences other activities that lead to performance improvement and hence competitive advantage. Therefore, researchers may find it particularly beneficial to use intermediate-level dependent variables at the business process, department, or project level (Wade & Hulland 2004, pp. 129–130). In light of this logic, the study will particularly address the impact of ICT on inventory management by focusing on the inventory management practices; supplier relationships, inventory operations, procurement and ordering
processes, warehousing and storage management process, and customer relationships through which such impact can be felt in the organization.

Revenue generation and cost reduction are the two major dimensions of process performance improvements through supply chain integration. ICT adoption is aimed at process improvement primarily cost reduction and revenue generation (Mukhopadhyay & Kekre, 2002). Such improvements, seen from the RBV, stem from resource synergy along the supply chain. Effective SCM aims to synchronize supply, production, and delivery (Lee et al, 2000). For this to happen, firms need to leverage the connectivity of the Internet to create an inter-firm digital platform, enabling real-time information sharing, and improving coordination of allocated resources across the supply chain (Lee, 2004). The digital platform helps establish connections among separate resources owned by supply chain partners, thus translating them into bundles of coexisting resources responsive to each other (Zhu & Kraemer, 2002). This is consistent with the notion of creating resource synergy as advocated by the RBV (Conner, 1991).

In inventory management, such value enhancement is manifest in the adoption of innovative techniques such as vendor managed inventory and business models that rely heavily on information sharing and collaborative planning. One such model is the Collaborative Planning, Forecasting and Replenishment (CPFR) model which is a concept that aims to enhance supply chain integration by supporting and assisting joint practices and replenishment of products throughout the supply chain. Information shared between suppliers and retailers aids in the planning and dealing with customer demands through a supportive system of shared information. This in turn allows for continuous updating of inventory and upcoming requirements, making the end to end supply chain process more efficient.

Several proactive drivers have been identified as rationale for business organizations to adopt the Internet-based technology (Gilmore, Gallagher & Henry, 2014). Such reasons include the desire of the company to expand its markets, nationally and internationally. With minimal capital outlay, a company can quickly locate more customers, the best suppliers, and the most suitable business partners worldwide (Sajuyigbe, 2012), enables
companies to procure material and services from other companies, at a speed and at less cost and shortens or even eliminates marketing distribution channels, making products cheaper and vendors’ profits higher (Molla & Licker, 2015), helps small businesses compete against large companies and enables a very specialized niche market (Jeffcoate, Chappell & Feindt, 2012). Gilmore et al. (2014) identify four major Internet-based technology drivers, both internal and external, in terms of their relevance to export marketing strategy. Internet-based technology drivers include product online transferability and Internet-based technology assets, and external drivers include Internet-based technology infrastructure and demand for Internet-based technology.

Procurement function contributes immensely to the successful implementation of projects in modern day businesses. Ranging from the personnel that are needed all the way to the raw material requirement all is put in the hands of the procurement function. A project needs some to see into it that the items required are acquired on time to avoid interfering with the work flow of the project. Procurement function ensures that all the necessities are at the right place at the right time and that they are acquired at the right price in order to have the project implementation become efficient. It is important that the project implementation does not delay in any way for that will mean additional cost. Projects have well prepared schedule of activities and costs are allocated to each activity and therefore no surplus budget unless the organization wants to incur an additional cost.

The importance of purchasing function is receiving increased attention as a key contributor to the strategic success of the firm. The importance of Internet based technology is attaining objectives in business organizations in a global competitive environment can’t be overstressed. Clearly, Internet-based technology over the internet has offered important advantages including a more efficient way to conduct business transactions for buyers and vendors alike (Buderi, 2015). Alrawi (2012) affirmed that with Internet-based technology buyers can access information instantly and even virtually test the product, which in traditional marketing concept would be time consuming. He said that information and communications technology has been dynamic in delivering products, customers have more options that could easily locate to and transactions can be made 24 hours a day from almost any of those locations. Internet-based technology
provides better access and communication with customers, which can be used for a better understanding of customer needs and finally offering a product which fully satisfy those and enables individuals to work at home and to do less traveling, resulting in less road traffic and lower air pollution (Allen & Fjermestad, 2011).

At the same time, companies can expand their product line, offering additional interactive or physical services around the core product (Chaffey et al., 2010). Internet-based technology gives new possibilities for distribution of the product and international expansion with relatively lower costs (Allen & Fjermestad, 2011) and allows lower inventories by facilitating pull-type supply chain management. This grants customizing of products as well as reduction of inventory costs.
2.3 Empirical Literature Review

The impact of centralization purchasing has so many benefits on organisation performance. One being economies of scale that helps to save organisation cost since the organisation gets a lot of discount when buying goods in bulk. Customers enjoy a cheap price during purchase of items. Products received from suppliers are of quality. All this can be achieved if the management are well organised and are able to control operations during centralized purchasing. Croom & Brandon-Jones (2007) found out that early e-procurement forecast significant improvements in procurement costs, improved status of the purchasing function, and changes the Structure of supply markets Anne (2008).

A study by Hardy, Susan, Williams and Catherine (2006) found out that the National e-Procurement Research Project Australia (NeRPA) was initiated in 2003 in response to ongoing interest among the business and academic communities about the current status of e-procurement in Australian industries and organizations. Different scholars have identified different strategic purchasing practices that may enhance performance. There is however no defined set of practices documented in literature as the one that enhances performance in a particular given context. Instead, researchers highlight different practices without an agreement on a uniform list of the practices. For instance, Ochoa et al (2003) highlight green procurement which they explain as the purchase of environmentally preferable products and services. On their part, Morris and Hergert (2002) noted the establishment of alliances with key suppliers. Mouritsen, et al (2003) considers the adoption of ICT as key. This lack of a uniform defined set of appropriate purchasing practices indicates the need to identify a set of these practices in specific contexts or organizations.

This broader, business oriented view encompassed a wider span of activities ranging from strategic sourcing and supplier relationship management through to settlement and payment of goods Knudsen (2002). Different scholars have identified different strategic purchasing practices that may enhance performance. There is however no defined set of practices documented in literature as the one that enhances performance in a particular given context. Instead, researchers highlight different practices without an agreement on a uniform list of the practices. For instance, Ochoa et al (2003) highlight green
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It is also evident that, there are a few cases that have scrutinized the link between appropriate purchasing and performance, particularly for the case of Carrefour supermarket. For instance, Narasimhan and Das (1999) investigated the influence of strategic purchasing and advanced manufacturing technologies on specific manufacturing flexibilities. Gershon (2004) sought to identify opportunities to deliver efficiencies in the use of resources within the organizational context. For this reason, it is important to have research focusing on this area. Therefore, this study will address this by investigating the effect of appropriate purchasing on performance in Carrefour supermarkets.

According to Schau, (2003) the impact of centralized purchasing on organisational performance has been backed as a new strategic view of supply chain management. The transformation of recruiting centralized purchasing can create value for enterprises through utilizing resources available fully. Previous studies have focused on the benefits of centralized purchasing on organisation’s performance e.g. Mose, Njihia, & Magutu, (2013) conducted a study on the Critical Success Factors and Challenges in centralized purchasing adoption among Large Scale firms in Nairobi Kenya. Most large scale manufacturing firms have decided on adopting centralized purchasing in procurement.

According to Njogu (2003) some organizations have successfully embraced the use of centralized purchasing. It was established that most of the purchasing strategies of large organizations within that provide the required connections towards the overall performance of the manufacturing sector. Centralized purchasing becomes increasingly more important the larger a small business grows. Appropriate purchasing is among the most important aspects to positively transform supply management. Different scholars have identified different purchasing practices that may enhance performance. An analysis
of the literature shows that there is no uniform set of practices proposed as the one that enhances performance that can be generalized to different companies. Instead, researchers propose different practices which indicate the need to investigate these practices for different companies.

It is also evident that organizations are facing a problem of rapid changes in procurement requirements which put pressure on how the procurement arm performs its activities both externally and internally to achieve its objectives. These could therefore vary from one organization or sector to another hence the need to investigate the challenges in different organizations in order to determine the improvements needed for each and every specific case.

Challenges Facing Implementation of e-Procurement The past research studies have identified challenges faced in the implementation of e-procurement which included; challenges associated with strategic initiative, legal infrastructure Jerome (2010), supplier enablement Filipe (2009), and technological integration and security issues. Barceló (1999). One limitation is to understand that the internet is not a strategy but rather a tool for enabling E-commerce. Supplier Enablement According to research by Aberdeen group (2007), it was discovered that supplier enablement is one of the top three challenges for e-procurement implementation. Suppliers do not fit into organizational plans or may want to do things their way National e-Procurement Project (2004).

Supplier enablement is becoming a bigger challenge because forcing suppliers to adopt organizational preferred trading methods can be problematic, particularly if there are no alternatives readily to hand Filipe (2009). Moreover, complex purchasing cannot be put place without considerable personal contact between the parties concerned Lysons (2003). According to Tan, Felix & Ter (2010), successful e-Procurement system is required to have suppliers willing and able to trade electronically A study conducted by the AGIMO (2005), showed that supplier adoption is important to the overall success of an e-Procurement program. The research came to a conclusion that the more suppliers using the system, the more willing the customers will be to use it. If suppliers are
reluctant to the e-procurement program, then consumer’s adoption will have a lower adoption rate thus limiting the capabilities of e-procurement solutions, Paulo (2009).

According to a study by Lin, Huang, Jalleh & Tung (2010) about the adoption of e-commerce by the health care organizations in Australia, there were complains about loss of interpersonal relationships with suppliers and customers via the use of e-procurement systems.

### 2.3.1 Speed of Order Processing and Performance of the Retail Industry in Kenya

A study conducted by Nepelski (2006) sought to find out how electronic procurement influences the organization of economic transactions. It pursued to give proof for changes brought about by ICT solutions in as to how firms arrange their activities. Also owing to speed in order processing, these solutions have led to more competition and transparency in the markets. Concerning the relationship between the effect of E-procurement on speed processing and sourcing strategy, it was revealed that electronic procurement leads to more market transactions.

Amin (2012) study on the electronic procurement and organizational performance among commercial state corporations revealed that commercial state corporations in Kenya have adopted e-procurement but there are several functions they still perform manually. Some of these functions performed manually include, coming up with a short listing of suppliers as well as preparation of the tendering process not forgetting the submitting of proposals. In this study the findings stated that the introduction of e-procurement has in effect led to accountability, cost of reduction in terms of data storage as well as sharing of information. A general atmosphere of transparency embraces most if not all commercial state corporations. E procurement has allowed for these corporations to respond in real time to their customers in their respective markets. In addition to this, such corporations have now the ability to streamline their procurement activities and processes.
Other relevant studies in the area of e-procurement include; Njoroge (2010); Orori (2011); Ratanya (2013); Kipyego (2012); Kambua (2013); Kyalo (2001); Mburu (2011); Mwongela (2014). All these studies have addressed the adoption and implementation of e-procurement in different sectors and how it affects. Very many other studies have been done which look at aspects of automated procurement systems and performance. However, most of them have a limited focus and narrow perspective. They do not adequately cover all aspects and facets of automated procurement systems especially in retail chain supermarkets. Another common weakness of these studies is the fact that almost all of them have not addressed the effect of automated procurements systems to the performance of local supermarkets thus the need for this study.

2.3.2 Accuracy in Order Processing and Performance of the Retail Industry in Kenya

Walsh and Godfrey (2010) also hint that relationships can be drawn from the perspective on which E retailers place in building customer loyalty and satisfying of the customer need. By ensuring accuracy in order processing as well as listening and understanding the customer as a show of interest are just a few of the ways an E-retailer cultivates a relationship with the customer and in return over time the customer grows to trust the E-retailer.

Reichheld and Schefter (2010) suggest that a one-size-fits-all E-Retail strategy will not work for the increasingly diverse internet shopping community. In order to survive an online business, an E-retailer must also ensure diversity in his field of business. Sticking to one type of product or a single target market may result to no volume market at all. E-Retailers must identify a niche and curve it for themselves as well as give value offers that will entice the customers. Therefore, these businesses may decide to address multiple sections.

Walsh and Godfrey (2010) also suggest that analogies can be drawn from the approach that E-Retailers take in building customer loyalty and satisfying customer need. An E retailer’s business mostly depends on its customers as it’s basically a repeat business
between the retailer who is the seller and the customer who is the buyer. Thus it is therefore very essential to the retailer that there is a continuous relationship between the seller and the buyer. This in turn ensures healthy business relationships between both parties ensuring an increase in prosperity even in highly competitive locations.

Maintenance of these relationships which is mostly long term has been found to be a lasting strategy for retaining customers. This has been made possible by use of ingredients such as trust, satisfaction as well as commitment in the retail industry. Also awareness of the multi-channel retailing is now becoming a recognized approach from leading e-retailers in the market around the globe. Jackson and Hams (2012) note that the scope of internet applications can vary hugely between organisational strategic initiatives, highlighting differences between Internet-based technology and E-Business strategies. They characterize Internet-based technology strategies as intangible resources that to most market strategies have become quite the focus. Normally, this focus is split by marketers in such retail segments. Durable goods and services are sold side by side and customers are highly involved in the product category.

Siegel (2010) also states that such E-Retailer websites tend to be mere virtual versions of their concrete counterparts. For e-retailing to be successful it needs proper branding. Their websites must be easy to navigate and regularly updated to meet customer dynamics. Products and services should be more in value than those of competitors in order to give them a niche curve. Such customer led approaches, according to Siegel (2010), involve listening to customers in a strategic way, deepening relationships and loyalty. Another benefit of ICT solutions revolves around strong distribution efficiency so that clients or customers are not waiting for long after purchase of products and services. This ensures a closer relationship with more faithful customers and a high degree of accuracy.

**2.3.3 Procurement Audit and Performance of the Retail Industry in Kenya**

Walsh and Godfrey (2010) also suggest that analogies can be drawn from the approach that E-Retailers take in building customer loyalty and satisfying customer need. Generally, availability of ICT solutions has been said to be a positive step in the right
direction. Thus it has eliminated barriers mostly affecting e-procurement thus ensuring equitability in the society (Hawkins 2011; Waddell 2009). For example, the primary function for introduction of e-procurement in the public sector is to provide more access to ICT equipment which includes phones and computer systems for public servants said to be with disabilities. Reich held and Schefter (2010) suggest that a one-size-fits-all E-Retail strategy will not work for the increasingly diverse internet shopping community. The government being a major player in the economy and thus it influences a huge role in the availability as well as cost of goods and services. This is possible due to the fact that buy virtue the government is a supplier of services a regulator as well as a buyer of goods and services. This leads to the emergence of economies of scale from public procurement that will eventually enter the general market.

A public entity that procures e-procurement systems should ensure that new protocol meets the same legal and policy obligations that govern the entire government procurement. This is also followed by adopting additional policies and standards covering the different procedures and risks which are drawn with e-procurement. Any purchasing systems must support user authentication so that individual transactions can reflect to the relevant person. Complex e-procurement systems should harness a comprehensive audit trial complete with a record of all activities carried out in the tendering as well as purchasing process. Internally, there also have to be rules to be followed as well as different departments carrying out various but systematic chains of activities. Jackson and Hams (2012) note that the scope of internet applications can vary hugely between organisational strategic initiatives, highlighting differences between Internet-based technology and E-Business strategies.

They characterize Internet-based technology in the procurement function as a great tool for many public organisations. It has allowed for redesigning of the procurement process. This has in turn improved reporting, accounting as well as transparency thus speeding up the procurement cycle and ensuring provision to more opportunities for suppliers and customers. Siegel (2010) also states that such E-Retailer websites tend to be mere virtual versions of their concrete counterparts.
2.3.4 Cost of Operations and Performance of the Retail Industry in Kenya
According to Kothari (2013), ensuring minimal cost of operations, must be an ongoing policy priority for business enterprises. Electronic business and internet strategies appear to be reinforcing market structures and the role of these companies (Rennhard, Sandro, Laurent, Platter & Hutchison, 2014). Auger, Barnir and Gallaugher (2013) observe that while internet provides SMEs with opportunities to participate in new supply chains and markets, they may compete and conflict with established channels and established market structures leaving a narrow escape for costs of operations incurred. There may be explicit or implicit pressures from leading firms to maintain existing channel structures and networks or to refrain from participating in new channels (Chong, 2012). Competition authorities need to monitor possible anti-competitive behaviour as the electronic marketplace evolves. Technological factors also come into play (Dixon, Thompsons & McAllister, 2012)

2.4 Chapter Summary
This chapter reviews literature from various authors with one objective mainly investigating the impact of ICT solutions on Kenyan supermarkets. The main reason these supermarkets embrace e-procurement is mainly to increase productivity and transparency in everyday transactions and make it easier for customers to get supplies around the clock. Precisely this literature review has researched on ICT processes and applications in the retail industry. How the efficiency of ICT affects these supermarkets. It has not been easy for ICT implementation for its full acceptance. How the Kenyan retailers have embraced ICT as a substitute for traditional methods of doing business. In the next chapter, we discuss research methodology which focuses on population; description of data collection instruments and formulas used. It also gives details of these research procedures and data presentation methods used.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The research design and methodology used in undertaking this study is provided in this chapter. The methods used in this research study include research design, sample and sampling techniques, population of study, data analysis and data presentation methods and also data collection methods.

3.2 Research Design

A well-structured questionnaire was adopted which constitutes descriptive research design. Through this design, the study sought to investigate the impact of internet on Kenyan Supermarkets. This type of research design determines and reports the way things are and attempts to describe such things as possible behaviour, attitudes, values and characteristics, (Mugenda & Mugenda, 2008). The independent variables of the study were Speed of Order Processing, Accuracy in Order Processing, Procurement Audits and Cost of Operations.

3.2.1 Population and Sampling Design

3.2.1.1 Population

A target population of 4 supermarkets within Nairobi County was used. Mugenda and Mugenda (2008) defines a population as that which the researcher wants to generalize the results of the study and cautions that selection of the population should not be guided by convenience rather but by consistency of the population. The study concentrated on managers and their assistants working with 4 supermarkets within Nairobi County, particularly in the branding, public relations, marketing and procurement departments of the supermarket.
3.2.1.2 Sampling design

Sampling design refers to the selection of elements in a population from which a researcher draws conclusions about the population as a whole. A population group is the subject on which measurements are obtained; it is the entity of study (Cooper & Schindler, 2006). The unit of study was the Supermarkets in Nairobi County for the intent of the study.

3.2.2 Sampling Frame

A sampling frame is the list of elements from which the sample is actually drawn (Ngechu, 2004). The study sampling frame was the list of the study target population, from where the study selected the sample size (Kothari, 2008). The sampling frame was obtained from list of supervisors and managers within the operations and finance department of each supermarket.

3.2.3 Sampling Technique

Only one manager and their assistant manager in the procurement, branding, marketing and public relations department were in this study used as a sample. Apart from that, for greater precise results, increased speed of collecting data, low research costs as well as availability of the elements of population are enabled through studying of the sample selection. Purposive sampling was made possible by use of the non-probability sampling design.

Use of purposive sampling technique made possible the selection of one manager and their assistant in the procurement, branding, marketing and public relations department of each supermarket as they are conversant with the impact of internet on Kenyan Supermarkets.

3.2.4 Sample Size
From the population of managers and assistants in the branding, procurement, marketing and public relations of each supermarket, this study precisely chose these department managers and their assistants from each of these supermarkets, thus bringing a sample of 4 senior employees from each supermarket and a total of 32 persons participating in the research. This specimen was recommendable as it related to the influence of internet on Kenyan Supermarkets.

3.3 Conceptual Framework

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed in order processing</td>
<td>Performance of Retail Industry in Nairobi</td>
</tr>
<tr>
<td>Accuracy of order processing</td>
<td></td>
</tr>
<tr>
<td>Procurement audits</td>
<td></td>
</tr>
<tr>
<td>Cost of operations</td>
<td></td>
</tr>
</tbody>
</table>
### 3.4 Operational framework

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>INDICATOR</th>
<th>MEASURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed in Order Processing</td>
<td>• Mobile ordering</td>
<td>Short lead period</td>
</tr>
<tr>
<td></td>
<td>• Digital reminders</td>
<td>Ever present internet</td>
</tr>
<tr>
<td></td>
<td>• Social media platform ordering</td>
<td>Quick response by suppliers</td>
</tr>
<tr>
<td>Accuracy in Order Processing</td>
<td>• Access to client records</td>
<td>Absence of difficulties in order processing</td>
</tr>
<tr>
<td></td>
<td>• Ease in tracking orders</td>
<td>Minimal errors in the ordering process</td>
</tr>
<tr>
<td></td>
<td>• Identification of discrepancies</td>
<td>Technologically solved difficulties</td>
</tr>
<tr>
<td>Efficiency in Procurement Audit</td>
<td>• Reduction in corruption</td>
<td>Efficiency in the audit process</td>
</tr>
<tr>
<td></td>
<td>• Ensures transparency</td>
<td>Rarely conducted audits due to high degrees of accuracy</td>
</tr>
<tr>
<td></td>
<td>• Timely audit reports</td>
<td>Favourable reports by external auditors</td>
</tr>
<tr>
<td>Operational Costs</td>
<td>• Eradication of paperwork</td>
<td>Fewer reported costs</td>
</tr>
<tr>
<td></td>
<td>• Customer satisfaction</td>
<td>Little or no labour turnover</td>
</tr>
<tr>
<td></td>
<td>• Reduced manpower</td>
<td>Higher profits reported</td>
</tr>
</tbody>
</table>
| Performance of retail industry in Kenya | • Increased sales  
• Loyal customers  
• Reduction in lead period | High net profit  
Fabulous opinion counts by customers  
Increase in Franchise requests |
3.5 Data Collection Method
Semi structured questionnaire were used in data collection from the respondents. This was developed in line with specific research objectives which aimed at answering the inquiry questions. The survey was conducted using a structured questionnaire, which was simple and easy for the respondents to answer.

3.6 Research Procedures
The research procedure started by carrying out a pilot test on five respondents from the target population to test the completeness of the questionnaires. This helped in ensuring that the information gathered was reliable and valid. It helped to manage the data collection process with respondents hence reducing ambiguity. This was followed by correction and amendments to the questionnaires to make sure it gave the best results at the end of the study. The questionnaires were administered personally to the respondents after explaining the purpose of the research to them and how their sincerity was important to the study. When collecting the questionnaire from respondents, the researcher went through it with them to ensure that it had all the required information while clarifying on some issues where need be.

3.7 Data Analysis Method
In this study both quantitative and qualitative data analysis methods were used. Kombo and Tromp (2008) argue that quantitative analysis is the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect. The primary data collected from the questionnaires was cleaned for completeness and consistency, the questionnaire was coded according to each variable of the study to ensure the margin of error was minimized and assured accuracy during analysis. The coded data was analysed using descriptive statistics which included mean, frequency, percentages and standard deviations, qualitative techniques. Data analysis was aided with help of Statistical Package for Social Sciences (SPSS). The data was presented using tables and figures. Multiple regression analysis was used to establish the relationship between the study variables.

The multiple regression equation was:
\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon \]
Whereby;

\[ Y = \text{Effect of Internet-based Technology in the Performance of Kenyan Supermarkets}, \]
\[ X_1 = \text{Speed in Order Processing}, \]
\[ X_2 = \text{Accuracy in Order Processing} \]
\[ X_3 = \text{Procurement Audit} \]
\[ X_4 = \text{Cost in Operations}, \]

While \( \beta_1, \beta_2, \beta_3 \) and \( \beta_4 \) are coefficients of determination and \( \varepsilon \) = error term.

This generated quantitative reports through tabulations, percentages, and measures of central tendency.

### 3.8 Chapter Summary

Chapter three has mainly described the research design and the methodology which was applied in the study to assess the effect of the impact of internet on Kenyan Supermarkets. The research took a survey approach which was conducted using a structured questionnaire. The sample frame was obtained from employees of supermarkets. The samples were selected through a purposive sampling method. The analysis of the data was done using the SPSS data analysis tool. The next chapter will present research findings in relation to the research questions.
CHAPTER FOUR
RESULTS AND FINDINGS

4.1. INTRODUCTION

In this chapter, the presentation and interpretation of the data collected from the field is discussed. Background information of the respondents and findings of the analysis based on the goal of the study have been presented in this chapter. For the analysis of data and discussion of the research findings, descriptive analysis was used.

4.2 Demographic Information.

From the sample selected of the managers and the assistants from each of the supermarkets comprising of procurement, marketing, branding and public relations managers each with their assistant and a total of 32 respondents whereby 25 respondents responded and submitted the questionnaires making a response rate of 83 percent, as illustrated in figure 4.2 below, based on Mugenda and Mugenda (2008), the response rate was considered to be excellent.

Figure 4.2 Response rate

25 questionnaires were filled and returned as represented by the pie chart below.
4.2.1 Gender of the Respondents

Those that filled and returned the questionnaire were 12 males while the females were 13. There was therefore no gender bias as represented by the pie chart below.

Figure 4.3 Gender of the respondents
The aim of the study was to confirm the gender category of the respondents and thus asked the respondents to indicate their gender category. From the research findings, a conclusion of the study confirmed that both genders were fairly involved in this research with the majority of the respondents to be as shown; 48% were males whereas females were 52%. Therefore the findings of this study did not suffer gender biasness.

Figure 4.4 Period of service in the supermarkets
In the study, the respondents were asked to indicate the length of time they had worked for the company. From the findings, 52% of the respondents had worked for a period of 4 years for the supermarket. 24% indicated working for 2 years, 24% of the respondents confirmed to working below 1 year.
Figure 4.5 Respondents level of Education

The study asked the respondents to state the highest level of education achieved. The research findings reported that majority of the respondents as revealed by (50%) percent were at bachelors level, 40% of the answers from the respondents indicated the highest level of education was masters level whereas 10% of the respondents had achieved diploma levels. This shows that workers of the supermarkets were learned well enough to comprehend the questions and thus would give credible feedback.
4.3 Effect of internet on business performance

Table 4.3: Extent at which Internet influences business processes

<table>
<thead>
<tr>
<th>Applications Extend</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Great extent</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Neutral Extent</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Little Extent</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From the research findings, it was established the extent to which internet affects business software in Kenyan supermarkets. Majority of the respondents as indicated by 40% showed that internet affects business software in Kenyan supermarkets to a great extent, whereas 25% percent of the research participants showed that internet influences business software in Kenyan supermarkets to an extent that is neutral. This findings indicated that internet influences business applications in Kenyan supermarkets to a great extent.

4.4 Discussions

4.4.1 Effect of Internet on the Speed of Order Processing

The study revealed that Internet application influences the speed of order processing in Kenyan supermarkets to a great extent. As long as it supports the core business activities any technology qualifies at different levels. Their technologies can not only speed up certain processes that equip the processing of information but they also allow certain activities to be restructured or undertaken at a reduced cost, and with improved accuracy. Hence this will be a foundation for building customer loyalty and may lead to repeat patronage (Foster & Cadogan, 2010).
By mixing traditional ways of working with electronic communications (Jackson & Hams, 2012) a more virtual form of business may result. On the effect of accuracy in order processing, the study revealed that respondents agreed that buyers are provided with various delivery options and self-service options via the internet as very high degrees of accuracy are realized, internet shortens transaction time which improves customer service and ensures lower costs of operations. As much as a company website has the capacity to serve a finite amount of users, not everybody will be interested. For this to work, it is essential to establish the precise market segment that the website will attract and can be steered to serve its customers. Reduced costs, closer relationships with customers increased profits and customer loyalty are some of the numerous opportunities the internet has offered to businesses. At a very fundamental level, businesses operating via the Internet usually enjoy much lower overheads than their traditional retail counterparts (Liu & Amett, 2010).

According to Windham and Orton (2010) a number of measurable elements that relate to achieving higher profitability via customer retention include: Base revenue, Growth, Referral and Price premium. The customer also refers potential customers or associates to preferred retailer, eliminating the cost of acquiring those customers (Reichheld & Schefter, 2010) evolving experience, it becomes clear that the emergence of Internet-based technology dramatically raises the significance of competition between businesses, and forces businesses to adapt continuously to new market situations. Stroud (2012) further explains that effective E-Retail business solutions demand integrated front and back end systems. Further explaining this is that when customers interact via web placing orders and buying goods, the financial and stock control systems respond by carrying out their part of transacting the process.

Pertaining E-retail challenges to e-customers, in the research findings, the study observed that the research participants disagreed that the supermarket always delivers on time, their customers are precise and determined while buying their products of choice customers resist to provide their personal information on the internet and supermarket delivers quality goods to the customers. The study findings disagreed with finding of La and Kandampully (2012) who states that the growth of Internet-based technology has
attracted considerable recent attention within all business spheres. Interestingly, traditional retail businesses have also embraced the opportunities offered by trading activities through the internet

4.4.2 Effect of Internet on the Accuracy of Order Processing

The study found that application of internet in the business processes in the Kenyan supermarket improved the speed at which orders were proceed to a great extent. According to Buder (2015), the retailer offers a number of further segmentations, or clubs - World of Wine, Baby and Toddler, that customers choose to join, and which enable even more precise delivery of promotional offers. Walsh and Godfrey (2010) argue that Internet-based technology also offers E-Retailers the opportunity to operate their business round the clock and round the globe. The shop is always open and in most cases, a virtual shop assistant, the help desks or customer service personnel are ready help. with those of Buder, (2015) who states that indeed, dot-com upstarts such as Net grocer, Peapod and Webvan, all of which delivered goods ordered on the Internet to e-customers’ doors aimed to put a serious hurt on their traditional shop counterparts, not to work with them. Walsh and Godfrey (2010) are probably the ultimate in personalized service and can command a price premium. They custom-built each computer so that rarely do two computers leave the factory with exactly the same configuration (Burt & Sparks, 2013).

From the findings on customer loyalty and E-retailing, the study confirmed that the research participants disagreed that the supermarkets’-retail systems are efficient in provision of quality service during and after purchase, their supermarket allows for participation of customers in updating the E-retail and that E-retail meets our clients demands. Building customer loyalty is vital to the success of the E-Retailer because, without loyal customers, even the most effective business model will fail, and the business will eventually try to satisfy the whims of only price-sensitive customers (Reichheld & Schefter, 2010). Reichheld and Schefter (2010) explain that attracting and retaining a larger number of customers requires E-Retailers to remain devotedly customer
centric, as e-customers continue to demand more from their Internet experiences and have many more opportunities to migrate to other sources of supply, based upon easily available price comparison information.

Nevertheless, on internet technology use for activities relating to retail in Kenya, it was established that E-retail offers no provision of various delivery options and self-service. Internet –based technology is not widely used in supermarkets. These findings were inconsistent with findings of South African Department of Trade & Industry, (2012) which states that the use of electronic ordering and processing in particular can significantly reduce costs by enabling continuous stock tracking, eliminating processing errors, reducing headcount and reducing lead-times and stock holding costs. Customer loyalty is essential for all businesses, especially for Internet-based technology ventures that seek to strengthen their brand image (Barton, 2013). Gosh (2013) predicted that competitive pressures of new electronic markets in improving customer loyalty, and meeting up with customers' demand would force businesses to join the market, irrespective of their willingness to do so.

4.4.3 Procurement audits

The study found that faster and more efficient procurement audits are aided by internet. As internet technologies move fast, it is important for business to take decisions that are both fast and right and choose a sustainable approach that fits into their business activities (Foster & Cadogan, 2010). Businesses to take decisions that are both fast and right and choose a sustainable approach that fits into their business activities (Foster & Cadogan, 2010).

The study established that competition from other supermarkets led to the adoption of new technologies in Internet-based technology, degree of adoption of Internet-based technology policy influences the magnitude of competition, they experience explicit and implicit pressures from leading supermarkets to maintain existing channel structures and competition authorities should observe for possible anti-competitive behaviour as the electronic market evolves. The study findings were observed to be in consistent with those of Foster and Cadogan, (2010) who states that as internet technologies move fast, it
is important for businesses to take decisions that are both fast and right as well as choose a sustainable approach that fits into their business activities.

4.4.4 Reduction in the cost of production
Internet adoption in supermarkets has led to the significant reduction in cost of production as labour has been reduced, efficiency increased and fewer resources used up. Respondents agreed that for effective management of customer relationships on the net, the supermarket leverages customer information. Technical and telecommunications infrastructure in developing countries involves the use of internet and websites powered by computers, also use of phones for e-commerce, voice-over-IP and even computer applications with no telecommunications component. All these forms of telecommunication are and can be used for creative ways by businesses to attract and retain customers as well as improve service offering.

4.5 Chapter Summary
The research findings that sought to establish the impact of performance of Kenyan supermarkets is mainly described in this chapter. The study established Speed in order processing, Accuracy in Order Processing, Procurement Audits and Cost of Operations were statistically significant affecting performance the Kenyan supermarkets. The study also established that there was a positive relationship between internet applications in supermarkets and the general performance of the supermarkets. The next chapter will be the discussion, conclusion and recommendations.
5.1 INTRODUCTION

In this chapter, the discussion of key data findings as well as drawing of a conclusion from the findings highlighted and recommendation is presented. The conclusions and recommendations drawn were concentrated on addressing the goal of the study. The researcher had aimed to investigate the impact of internet on the performance of Kenyan Supermarkets, to establish whether internet affects the speed of order processing, to critically examine whether internet contributes to the speed of order processing, to find out if internet supports procurement audits and if internet contributes to the reduction in cost of operations in the Kenyan supermarkets.

5.2 Summary of findings

The main aim of the study was to investigate the effect of internet on the performance of Kenyan Supermarkets. By use of a structured questionnaire the researcher was able to conduct a survey approach. The study established that internet influences performance in the Kenyan supermarkets to a great extent. The study also showed efficiency in the performance of Kenyan supermarkets is influenced to a great extent through internet application. Commerce, degree of adoption of Internet-based technology policy affects the magnitude of competition among supermarkets and that there are explicit and implicit pressures from leading supermarkets so as to maintain existing channel structures.

5.2.1 Speed of order processing

Mobile ordering, digital reminders and social media platform ordering have increased the speed of order processing which in turn the shows the effect of Internet based technology on the performance of supermarkets in Kenya.

5.2.2 Accuracy of Order Processing

Access to client records, ease in tracking orders and identification of discrepancies enhance accuracy in order processing.
5.2.3 Procurement Audits

Corruption reduction, ensuring transparency as well as timely audit reports increase efficiency in procurement audits which shows the effect of internet based technology on the performance of supermarkets in Kenya.

5.2.4 Operational costs

Eradication of paperwork, customer satisfaction and reduced man power has led to the reduction of operational costs as a result of the influence of ICT on the performance of supermarkets in Kenya.

5.3 Conclusion

The study revealed that Internet application influences Speed of Order Processing in Kenyan supermarkets to a great extent. The study confirmed that supermarkets have not fully shifted to internet. Concerning the accuracy of order processing it was observed that use of internet influences business applications in Kenyan supermarkets to a great extent. It was established that internet offers no provision of various delivery options and self-service and is not widely used in our supermarkets. In the case of procurement audit the study found that the procurement audits are to a large extent influenced by internet-based technology. Kenyan Supermarkets have found this technology as an absolute rebirth. In conclusion the study looked into the cost of productions where findings showed that not only can internet technologies hasten specific processes that are allow for the processing of information but they also allow certain activities to be restructured or undertaken at a reduced cost, and with improved accuracy from other supermarkets influences the adoption of new technologies in Internet-based technology, degree of adoption of Internet-based technology policy influences the magnitude of competition, they experience explicit and implicit pressures from leading supermarkets to maintain existing channel structures and competition authorities should observe for possible anti-competitive behaviour as the electronic market evolves.
5.4 Recommendations of the Study

The study recommends that management of Kenyan supermarket should adopt internet and use it in E-commerce services as it will assist in minimizing the transaction time which improves the customer service. There is need for the Kenyan supermarket to embrace internet, as it will increase the number of customers in their establishments allowing them to deliver quality goods to the customers, who in turn enhances customer loyalty as well as improve the internet’s effect on accuracy of order processing. Another recommendation dwelt on the formulation of a good policy framework being essential to act as a guide in the implementation of internet in supermarkets and the retail business at large. Also the study recommends that adoption of internet be highly considered by supermarkets in Kenya as it significantly aids cutting down of costs of production.

Further research of the study sought to determine the impact of internet on supermarkets in Nairobi. To this end, the study recommends a research to be carried out on factors affecting internet adoption among Kenyan supermarkets, as it was only confirmed within Nairobi. For the national government, the study recommends that through the devolved structures it should subsidise fees for acquisition of knowledge, skills and abilities in computer institutions of higher learning. This will ensure that a larger population not only those in retail sector attain the necessary computer skills to stay abreast with internet based technology. The study also shows that for there to be a smooth supply chain within supermarkets, the wholesalers and the manufacturers should also embrace internet based technology. The study aimed at determining the effect of internet on Kenyan supermarkets. In conclusion, the study advises a research to be carried out on factors internet adoption among Kenyan supermarkets.
REFERENCES


APPENDIX

QUESTIONNAIRE

This questionnaire is intended for the purpose of enabling me collect data for my project as a requirement by the University for an Award of a degree in Purchasing and Supply Management. Please feel free and answer all questions.

General Background

1. Please tick your gender
   Female ☐  male ☐
2. What is your highest level of education?
   Primary ☐  High School ☐  College ☐
3. What department of the supermarket do you work in?
   Finance ☐  Operations ☐  Stores ☐
4. For how long have you worked for this department?
   6-10 years ☐  11-15 years ☐  16-20 years ☐
5. Does your work involve use of a computer?
   Yes ☐  No ☐
6. How frequently do you use a computer?
   Daily ☐  Once a week ☐  Never ☐
7. Do you understand what internet means?
   Yes ☐  No ☐  Somehow ☐
8. To what extent do you interact with internet?
   Daily ☐  Once a week ☐  Never ☐
9. Does your work involve interaction with internet?
   Yes ☐  No ☐
10. To what extent do you think internet impacts on the performance of the supermarket?
    Very Great ☐  Great Extent ☐  Little Extent ☐
B. Speed of order processing

11. How often do you place orders for your stock?
   Daily  ■  Weekly  ■  Biweekly  ■  Monthly  ■

12. What means do you use to place this orders?
   Telephone  ■  Email  ■  Visit to manufacturer  ■

13. How long do these orders take to reach your warehouse?
   Short period  ■  Fairly short period  ■  Long period  ■

14. Do you think orders made via email/ internet is preferable?
   Yes  ■  No  ■

C. Accuracy of Order Processing

15. During placement and processing your orders, have you encountered any difficulties?
   Yes  ■  No  ■

16. Do you think some of these difficulties are technologically related?
   Yes  ■  No  ■

17. Through what means have you made errors during order processing?
   Email/Internet  ■  Telephone  ■  Visit Manufacturer  ■

18. Does internet have a role in ensuring accuracy during order processing?
   Yes  ■  No  ■
D. Procurement Audits

19. Do you understand what procurement audit is?
Yes   No

20. How often do you conduct procurement audits?
Frequently   Less often   Never

21. How would you describe procurement audits conducted through a computer?
Efficient   Not efficient   don’t know

E. Reduction in cost of operations

22. How would you describe the cost of production with the presence of computers in your supermarket?
High   Extremely high   Low

23. Do you think use of computers makes operations easier?
Yes   No   Somehow

24. Do you think energy and labour related costs are cut down as a result of use of computers?
Yes   No   Somehow

25. Do you recommend to the management to use computers in every department in carrying out their operations?
Yes   No