EFFECT OF ELECTRONIC PROCUREMENT PROCESSES ON THE
PERFORMANCE OF NON-GOVERNMENTAL ORGANIZATIONS IN KISUMU
CENTRAL: A CASE OF LIFE FOR CHILDREN WELFARE ORGANIZATION

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD
OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION

DEPARTMENT OF MANAGEMENT SCIENCE

MASENO UNIVERSITY

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ABSTRACT

Electronic procurement concept is a recent and integral focal point among the procurement practitioners. It enhances core procurement activities such as, e-ordering, e-buying, e-tendering, e-sourcing, and e-payment. Studies on the e-procurement have been done in different countries, with assertion that organizations adopting it are likely to be more successful. This has not been explored for Non-Governmental organizations. According to the NGO's economic survey of (2013) Kenya has more than 4,500 NGO's of which 77 have registered their operations in Kisumu central. While Survey of 2012 indicates that there are more than 15,000 households that directly benefit from the NGO's in Kisumu Central. However, there have been a lot of challenges faced by the NGOs, such as misappropriation of funds and this has seen some donors withhold funds due to accountability issues. One such area where accountability issues arise is the procurement of services. Though many organizations opt for electronic procurement as a solution, no known study has been conducted to examine if this is the case. The purpose of the study was therefore to examine the effect of electronic procurement processes on the performance of non-governmental organizations. The objectives of the study were to establish the contributions of electronic procurement towards efficient performance of procurement departments of NGO's, determine the causes of non-adaptation of electronic procurement in the NGO's, determine the relationship between the implementation of the electronic procurement processes on the performance of NGO's. The design was both descriptive and correlation. The target population was 88 employees. A sample size of 66 respondents was randomly selected. Questionnaire was used to obtain primary data while secondary data was sourced from sales force reports. The study was guided by a conceptual framework where the dependent variable was the performance of NGO's and the independent variable was electronic procurement processes. Descriptive results indicated that e-procurement contributed to cost savings (33%), efficiency (27.3%), transparency (24.2%) and error free transactions (15.2%). Moreover, it was established that insufficient donor funding (33.3%), mismanagement of funds (31.8%), organization policy (13.6%) and lack of skilled personnel (21.2%) were found to cause non adoption of e-procurement at the respective levels. Inferential results showed that there is a positive and significant correlation between e- sourcing and children enrolment of 0.38 ($p<0.01$), e ordering and funds received at 0.707 ($p<0.01$). On the other hand, the correlation between e- ordering, e-tendering and e-buying with children enrolment are positive but insignificant correlation coefficients of 0.45 ($p>0.01$), 0.016 ($p>0.01$), and 0.145($p>0.01$) respectively. The study concluded that e-procurement contributes to higher efficiencies and that there exist a correlation between e- procurement processes and the performance of nongovernmental organizations. The study recommends increased investment on e-procurement as it influences the organization performance.

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

1.1.1 Performance of Non Governmental Organizations

The Non Governmental Organizations Coordination act, 1990 (no. 19 of 1990), amended through the Kenya Gazette Supplement No. 85 (Act No. 8) 23 October 1992, defines a Non Governmental Organization as "a private voluntary grouping of individuals or associations, not operated for profit or for other commercial purposes but which have organized themselves nationally or internationally for the benefit of the public at large and for the promotion of social welfare, development, charity or research in the areas inclusive of, but not restricted to, health, relief, agriculture, education, industry, and the supply of amenities and services" (GoK 1990).

Traditionally, NGOs depend on donors for funding. However, overtime, the increased numbers of NGOs competing for donor funding has constrained the amount and level of funding available for each NGO (The Economist, 2000). Donors, on the other hand, have reviewed funding policies, preferring to work in blocs of "like minded donors" or in regional blocs. Some foundations have transferred their headquarters to the regions nearer the partners, for example, The Ford Foundation, Rockefeller Foundation, and Church World Service, amongst others. The situation has meant additional effort for NGOs competing for the meager funds to emerge as leaders in best practice of governance, accountability, efficiency, effectiveness, timeliness, sustainability. As NGOs seek to be effective players in the society, they are faced with the problem of bringing various scarce resources together in forming an organizational that is able to survive in the turbulent environment.

One key area contributing to low performance NGO's relates to procurement of goods and services. A step towards addressing this problem has been the adoption of electronic procurement to stem the procurement processes.

1.1.2 E-procurement trends in the world

E-procurement defined in simplest terms, as the automation of an organization's procurement processes using web-based applications. Unlike enterprise resource planning (ERP) systems that enable businesses to automate their internal processes, e-procurement enables widely dispersed

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buyers and suppliers to come together, interact, and execute purchase transactions directly over the Internet. In a fully web-enabled e-procurement system, each step in the procurement process occurs electronically. From creating and submitting purchasing orders (Pos) to receiving and paying for goods all transactional data is automatically routed through workflow processors, reducing the time and cost of procurement activities, and boosting operational efficiency of the e-enabled organization. E-procurement applications consolidate the paper-based catalogs of multiple vendors by digitizing product information into a single, one-stop shopping source for direct and indirect goods and services. In most cases, e-procurement applications are transparent to end-users. Embedded in the business processes and IT systems of buyers and suppliers, e-procurement applications lower process and inventory costs, extend supplier reach, and improve customer access to suppliers.

Modern procurement is being shifted from paper-based, people-intensive buying systems toward electronic-based purchase procedures that rely on Internet communications and Web-enhanced buying tools. Develops a typology of e-commerce tools that have come to characterize cutting-edge industrial procurement, E-commerce aspects of purchasing are organized into communication and transaction tools that encompass both internal and external buying activities. The impact of the changing buying center on procurement outcomes in terms of efficiency and effectiveness is also analyzed. Kabaj (2003) contends that an efficient public procurement system is vital to the advancement of African countries and is a concrete expression of their national commitments to making the best possible use of public resources. Equally, Kakwezi and Nyeko (2010) argues that the procurement departments of public entities in Uganda are faced with the problem of not having enough information about the procurement procedure, its inputs, outputs, resource consumption and results, and are therefore unable to determine their efficiency and effectiveness. This implies that such a problem requires establishment of clear procurement procedures and performance standards. Performance standards when adopted can provide the decision-makers in the procurement department with unbiased and objective information regarding the performance of the procurement function.

Procurement and disposal planning are central to proper procurement management. Public Procurement and Disposal of Public Assets (PPDA) Regulation 96(1) provides that a user

department shall prepare a multi-annual, rolling work plan for procurement based on the approved budget, which was submitted to the Procurement and disposal unit to facilitate orderly execution of annual procurement activities. Rotich (2011) admits that the evaluation or measurement of procurement performance has always been a vexing problem for procurement professionals. He asserts that traditionally, firms concentrate on analyzing their own internal trends which does not portray the true picture on how they compare well with competitors. Such an approach ignores what the competitors are doing. Lenders (1997) reveals that a firm does not wish to make known to its competitors how or what it is doing for obvious competitive reasons. This has been the case in the public sector where procuring entities have not been making available their procurement data due to the sensitive nature of the data. On the other hand, Baquero (2005) argues that traditional government contracts worldwide have tended to focus on inputs rather than outputs. He suggests that the focus should instead be on what projects can deliver rather than how much the project costs which calls for high level of performance management in the entire process.

In Kenya, to manage effectively and more efficiently the procurement process, procuring entities through the existing legal framework are required to firstly consolidate departmental procurement plans to provide the entity's corporate procurement plan which before its implementation must get the accounting officer's approval. Industry Manual, (2008) counsels that a procurement plan is an instrument for implementation of the budget and should be prepared by the user departments with a view to avoiding or minimizing excess votes in the entities' budgets and to ensure that procurements do not proceed unless there are funds to pay for them. This implies that all procurement plans must be well integrated into the budget process based on the indicative budget as appropriate and in compliance with the procurement law. Agreeably Mamiro (2010) in his findings underscores these facts and concludes that one of the major setbacks in public procurement is poor procurement planning and management of the procurement process which include needs that are not well identified and estimated, unrealistic budgets and inadequacy of skills of procurement staff responsible for procurement. Similarly, Kakwezi and Nyeko (2010) argue that procurement performance is not usually measured in most PEs as compared with the human resource and finance functions. They conclude in their findings that failure to establish performance of the procurement function can

lead to irregular and biased decisions that have costly consequences to any public procuring entity. Therefore, this study was conceived by the limited scientific literature documenting the relationship between procurement performance and factors such as planning, resource allocations, staff competency, efficiency and contract management. According to Bialy (2008) e-Procurement is done with a software application that includes features for supplier management and complex auctions. The new generation of e- procurement is currently on demand or software as a service (SaaS). The e- procurement value chain comprises indent management, e- tendering, e- auctioning, vendor management, catalogue management, and contract management. Indent management is the workflow involved in the preparation of tenders. This part of value chain is optional, with each procuring department defining its indenting process. As concerns works procurement, administrative approval and technical sanction are obtained in electronic format. On the other side, in goods procurement, indent generation activity is done online.

The end result of the stage is taken as inputs for issuing (Peter, 2012). e- Procurement (or Business- to- Business networks) is an online system by which companies can be connected directly to suppliers for the purpose of buying products and services at the lowest cost possible. e- Procurement essentially replaces its offline version, called tender. The advantages and disadvantages of e- Procurement mostly parallel the universal benefits and disadvantages of the internet. The public sector organizations use e- Procurement for contracts to achieve benefits for example increased efficiency and cost savings, faster and cheaper in government procurement (Acher 2005) and improved transparency, to reduce corruption, in procurement services. e-Procurement in the public sector has seen rapid growth in recent years. Act 590 of Louisiana's 2008 Regular Legislative Session requires political sub- division to make provisions for the receipt of electronic bids. Over the last 40 years, while private and public sector organizations have been utilizing Information Technology (IT) systems to streamline and automate their purchasing and other processes, it is only in the past decade that e-Procurement systems have attracted attention. While there is debate about how recently e-Procurement has emerged. (Dai & Kauffman, 2001; Koon, Smith & Mueller, 2001), there is no doubt that the use of the Internet in e-Procurement provides several advantages over earlier inter-organizational tools.

Electronic Data Interchange has been providing automated purchasing transactions between buyers and their suppliers since it was launched in the 1960s. Enterprise Resource Planning (ERP) followed in the 1970s, and then came the commercial use of the Internet in 1980s. It was only in the 1990s that the World Wide Web - the multimedia capability of the Internet - became widely enabled and provided the essential resource for the automation of procurement (OGC, 2002). According to Koon, Smith and Mueller (2001), there are three types of e-Procurement Systems: Buyer e-Procurement Systems, Seller e-Procurement Systems and Online Intermediaries. This study is focused predominantly on Buyer e-Procurement Systems, which typically demonstrate one of two systems philosophies in regard to e-Procurement: Enterprise Portal and Enterprise Application. While various e-Marketplaces have been launched based on the Enterprise Portal philosophy, the implementation of e-Procurement systems usually consists of two technologies within the Enterprise Application philosophy: a workflow system integrated with an e-Procurement application that supports requisition to payment; and the electronic catalogue that lists suppliers' items and prices over the Internet. Within these two philosophies, there are again two different approaches that the public sector agencies have used for implementation of e-Procurement: an end-to-end e-Procurement solution (the "big bang" approach), and the incremental implementation. Some of the commonly used tools in the public sector are e-Tendering, e-RFQ, e-Auctions, e-Catalogues, and e-Invoicing. These tools, including complete marketplace technologies, have been developed by the key players in the e-Procurement market such as Ariba, Commerce One, Oracle, and SAP. Regardless of the various shapes and sizes of e-Procurement systems in the market, it has been argued that the basic procurement process is the same across the public sectors and can be addressed with straightforward technology to automate standard processes (NePP, 2005). However, this paper has more of a conceptual approach to implementation of an innovation and, therefore, does not focus on the precise technical description of these e-Procurement tools. The fundamental problem motivating this study is the need to understand the CSFs underlying the implementation of e-Procurement initiatives in the public sector.

Electronic Procurement in the public sector is emerging internationally; hence, initiatives have been implemented in Singapore, UK, USA, Malaysia, Australia and European Union. e-Procurement projects are often part of a country's larger e- Government efforts to better serve its

citizen and businesses in the digital economy. For instance, Singapore's GeBIZ was implemented as one of the programmes under its e- Government master plan. This field is populated by two types of vendor's: big enterprise resource planning (ERP) provides which offer e-Procurement as one of their services, and the more affordable services focused specifically of e- Procurement. According to Aberdeen 2001, E-Procurement applications focus on creating efficiencies; their goal is to make the traditional purchasing procedures more efficient and cost effective (Wu, 2007 and Turban et al, 2006). Larsen et al (2008) noted the development and implementation of electronic commerce business models such as a procurement portal in organizations in a challenge that goes beyond mere technological functionality.

Top management support organizational adaptation, and training of employees are examples of issues for the successful implementation of organization IT system (Kawalek et al, 2003). In the study on e- procurement adaptation in Greece, Panayiotou et al. (2004) pointed out e-procurement strategy, re- engineering of procurement processes and management of expectations as key success factors in an e- procurement adaptation strategy. Their conclusion was that implementation must be achieved in a manner of "incremental change" where technological solutions apply to regulations and policies. Today, (Turban and King, 2003), being also called electronic public procurement. UK National e- Procurement Project Report (2004) notes e-Procurement is a tool to enable procurement activities, including sourcing, ordering, commissioning, receipting and making payments for the whole spectrum of an authority's activities. Solutions have been procedural, technical, and legal in nature (CEN, 2005).

1.1.3 E-procurement in Kenya

Several changes have taken place in Kenya concerning ICT though not properly through a legal framework over the first 10 years of inception. Notable changes have been formation of the Multi- Stakeholder Kenya ICT Action Network. Through the network, a policy processdeemed to be inclusive has been catalyzed, resulting in the country's first draft ICT policy document which was approved by Cabinet in February, 2006, (Republic on Kenya, 2006). Though electronic commerce is viewed as involving many ministries, Communication Commission of Kenya (CCK) is responsible for revitalizing and transforming the economy into modern market oriented through e-commerce (Republic of Kenya, 2006). Many firms in Kenya and world over

have registered dismal performance in terms of business growth and profit making because of insufficient and unsustainable procurement procedures.

Employees have been fired because of low performance rate persistent lateness and wrong attitude towards work (Johnson, 2008). Studies in ICT adoption frequently highlight in house technical capabilities and experience with ICT, as key contributory factors (Chapman *et al,* 2000). Price Waterhouse coopers (2002) defend this view by stating "we don't have enough internet human resources, and can't hire people". Implementing a new technology needs skill and knowledge to operate in the organizations and most organizations do not implement because organizations' employees are not familiar with new technology. Empirical evidence identifies that organization whose employees have the necessary skills and technical knowledge are more likely to implement e- Government applications (Lin and Lee, 2005). In Kenyan market, research conducted by Humphrey, *et al.* (2003) revealed that conducting e- commerce is mostly meant for provisions that enable the firms identify trading partners that they could contact off- line with a view to doing business. The follow- up to an initial contact generally is to taking place through other channels such as e- mail, hyperlink, the telephone, fax or the post.

Despite the benefits of e-procurement as recognized by managers such as better coordination with suppliers, quicker transaction times, higher flexibility, better supplier integration, and lower costs (Kheng and Hawamdeh, 2002), it is clear that adaption of e-procurement is still very low (Gunasekaran and Ngai, 2008). According to Mitra *et al.* (2000), the most common forms of e-commerce in Kenya market are e-procurement, e-banking and of late embanking. Of the three, e-procurement which is user friendly; internet based purchasing system (Nikolaos, Poulo, and Bokos, 2006) has generated a lot of interest due to its ability in improving efficiency and transparency, thereby reducing the cost of operation within and between business parties (De Boer, *et al.*, 2002).

Though many nongovernmental organizations opt for electronic procurement as a solution to low performance, no known study has been conducted to examine if this is the case. The purpose of the study was therefore to examine the effect of electronic procurement processes on the performance of non-governmental organizations.

1.2. Statement of the Problem

The performance of Nongovernmental organizations is considered to be very critical in an economy since they compliment the national governments in ensuring that both social and economic issues affecting the economy are addressed. Moreover, many citizens especially the old and the vulnerable rely mainly on nongovernmental assistance. The performance of such organizations is therefore major contributor to the economy. One such area considered to affect the performance is the procurement of services. In today's world, e- Business has become part and parcel of everyday life in many business circles as a large number of organizations are involved in one form of e- Business or another such as e- procurement. The emphasis is on the use of technology to substitute or enhance transactional activities in order to gain operating efficiencies. E- Procurement systems also allow more efficient integration of supply chains and provide better organization and tracking of transaction records for easier data acquisition Transactions can be standardized and all bids for products and services can be tracked more easily, allowing business owners to use such knowledge to obtain better pricing. Due to faster exchanges of information and delivery of goods and services, e- procurement also promotes shorter product-development cycles. Though electronic procurement as been considered as a away to enhanced competitiveness, lowered costs and high performance, no known study has been conducted to examine if this is the case. The purpose of the study was therefore to examine the effect of electronic procurement processes on the performance of non-governmental organizations.

1.3.1 General Objectives

The overall objective of the research was to study the effect of electronic procurement processes on the performance of the procurement department of Non-Governmental organizations in Kisumu central.

1.3.2 Specific objectives

1. To establish the contributions of electronic procurement to the procurement departments of Non-Governmental organizations in Kisumu Central

2. To establish the causes of non-adoption of electronic procurement in the Non-governmental organizations procurement departments in Kisumu Central.

3. To determine the relationship between the infusions of the electronic procurement processes on the performance of the nongovernmental organizations in Kisumu Central.

1.4. Research Questions

1. What are the contributions of electronic procurement to the procurement department Non-Governmental organizations in kisumu central, life for children welfare organization?

2. What are the causes of non adoption of electronic procurement in the Nongovernmental organizations procurement department in Kisumu central?

3. What is the existing relationship between the infusions of the electronic procurement processes on the performance of the nongovernmental organizations in Kisumu central?

1.5 Scope of the Study

The study was done at the life for children welfare organizations in Kisumu being the national office, but with the capturing of all the relevant information from other branches, the researcher's intention was to focus only on life for children welfare organization procurement departments. The study covered some aspects of electronic procurement processes, through the use of information communication Technology on the performance of the procurement departments of Non-Governmental organizations in kisumu central., which included the need for the contribution of information Communication technology (ICT), factors affecting the adoption of electronic procurement, implication of non adoptation and strategies necessary to address electronic procurement issues in the selected Non-Governmental organizations dealing with charity children institutions in kisumu central.

1.6. Significance of the Study

The study arose from the general observation that the management teams should embrace in the modern times where efficiency plays a critical role in sustaining the competitive actions amongst other players in the field. Donors are close and far off at the same time and therefore whatever ties the beneficiaries and the donors is the good, enhanced communication between the implementers of the projects and the recipients. The reports generated must be articulate enough, timely, and consistent with the donor requirements. Therefore the main aim of the research was to undertake a study on improving purchasing/procurement procedures by infusing electronic procurement process in enhancing quality, service delivery and desired performances of non-governmental organizations in kisumu central. It is evident that increased efficiency shall expand the number of beneficiaries of the services offered by charitable children institutions (CCI) in kisumu central. At the same time their capacity shall be strengthened by the donors and other stakeholders in the very field, and this will come with the strengthening of the diversity of needs that unique organizations strives to offer on, networking and collaborations if enhanced then the sustainability aspect shall be manifested positively on the sight of the donor and the recipient.

On the government arms, with the devolution of many ministries to the county level the strengthening's and linkages shall ensure that the impact of the implementation of the children act 2005 shall be enhanced. Study for the government it will assist to develop and promote strong linkages with the parent Ministry (Ministry of Gender, Children, and Social Development), the Kenya police children's desks at the police stations, provincial administration, judiciary, and other government institutions. For the partners this study shall seek to promote very good relationship amongst the players, this if realized it shall encourage more partnerships and enhance service delivery to replicate the value for the money down to the beneficiaries.

1.7 CONCEPTUAL FRAMEWORK

Conceptual frame work for the ICT on performance of NGOS

Independent variable   **Dependent variable**

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┌─────────────────────────┐              ┌─────────────────────────┐
│ Electronic Procurement  │              │ Life for Children Welfare│
│     E-sourcing          │              │ Organization            │
│     E-buying            │──────────────▶│ Performance             │
│     E-tendering         │       ▲      │     Children Enrolment  │
│     E-ordering          │       │      │     Funds received      │
│                         │       │      │     Efficiency          │
│                         │       │      │     Expansion of        │
│                         │       │      │     operation           │
└─────────────────────────┘       │      └─────────────────────────┘
                                  │
            Intervening │ variables
                                  │
              ┌───────────────────┴──────┐
              │   Government policy       │
              │   NGO, coordinating       │
              │   Board regulations       │
              └──────────────────────────┘
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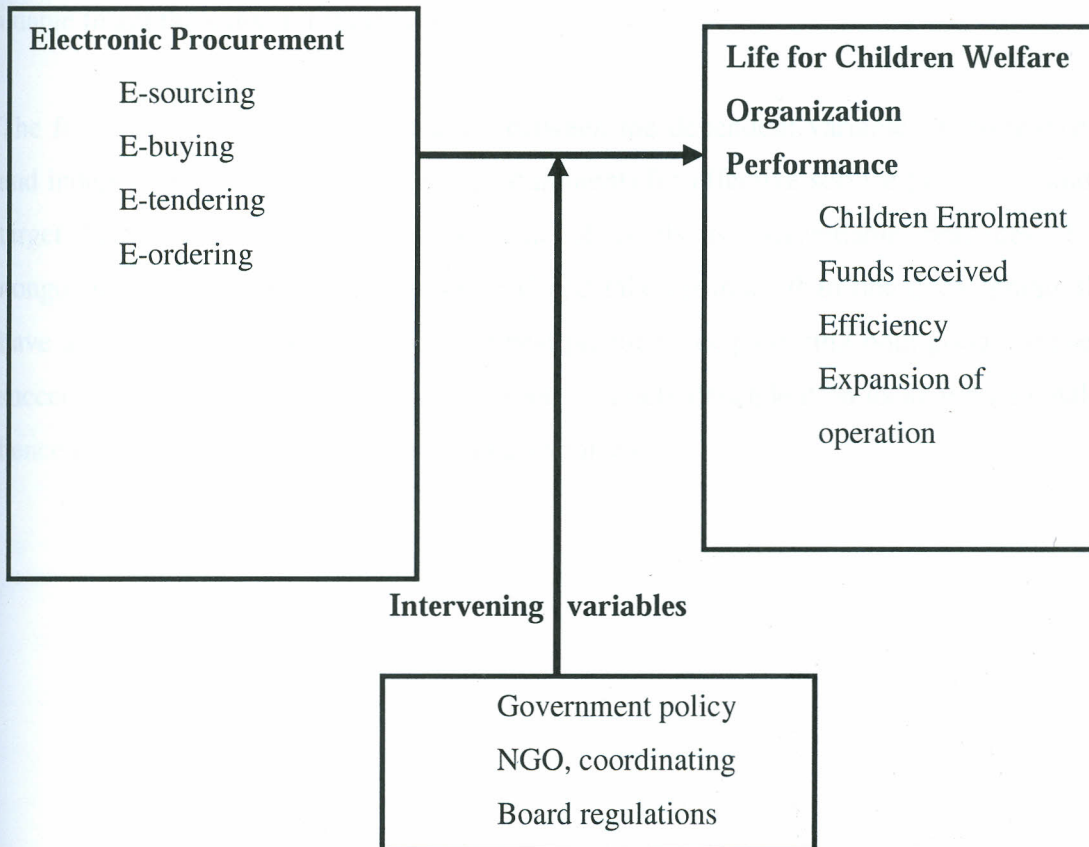
Fig: 1. Conceptual framework on the relationship between Information Communication Technology and life for children welfare organization's Performance

Source: Adapted from: (Colin 1995, Armstrong 2005 and Kaplan, 1996b)

The relationship above shows the dependent variable, organizational performance as affected by the independent variable: electronic procurement activities which has

E-ordering e-buying-tendering-ordering, the above independent variable elements have a direct effect on performance of the Non-Governmental Organizations, under study for they directly affect the Children Enrolment, Funds received, Efficiency, Expansion of operation

The government policies, management process and weather conditions acted as intervening variables between electronic procurement practices and organizational performance relationship.

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When the government imposes regulations that are implemented by the public benefit organizations [NGO-Coordinating Board, the organizations are affected differently, when taxes are imposed on the organizations of nongovernmental natures, the operational costs are proportionately affected this could lead to shying off by the donor community for they could be unable to get the value for their money

The framework also shows the relation between the dependent variable (performance of NGO and independent variables (electronic procurement) for effective service provisions and ultimate target beneficiaries, prudent management of funds is unavoidable practices. For a the nongovernmental organizations to succeed and take up more than one cycle grants they must have adequate knowledge in employing best practices for procuring both goods and services to succeed, since nongovernmental organization is solely dependent on local and national funding hence government funding are intervening variables.

CHAPTER TWO
LITERATURE REVIEW

2.1. Theoretical Literature

Procurement is the acquisition of goods and or services at the best possible price that meets the needs of the purchaser in terms of quality, quantity, time, and location. Procurements used to promote fair and open competition for business while minimizing exposure to fraud and collusion According to Mackay, Gemino, Igbaria, and Reich et al (2001). Almost all institutions, government organizations, local authorities, and businesses have a procurement process of some kind in place. Unfortunately, not all procurement processes are as robust as they should be and not all staff members are aware of procurement rules and guidelines. Having a robust Procurement process that is adhered to by all members of staffs is essential to the operational efficiency of any institution. The traditional way of the procurement procedures that has been in place for many years included, need identification, requisition, bill of material, request for quotation, ordering, goods advisory note, invoice note and receiving this method has a lot of paper work, that is time consuming, costly and tedious. There are several sequences of non-value addition such as clerical activities, excessive documentation procedures; a lot of time is wasted by one staff and the other for preparations, confirmation, approvals and ordering. According to Killen (1995) Cost is also incurred between the many clerical staffs that are involved in the exercise of ordering process. Information communication technology is therefore warranted to enhance quick access to the level of orders using economic order quantity EOQ, Enterprise Resource Planning ERP, Electronic Data Interchange EDI, and Electronic point of sale POS,

2.1.1 E-procurement

Contributions of Electronic-Procurement is the use of Internet-based (integrated) information and communication technologies (ICTs) to carry out individual or all stages of the procurement process including, sourcing, negotiation, ordering, receipt, and post-purchase review (Croom & Brandon-Jones, 2004). Businesses have realized that time and cost savings can be achieved by having a link with major suppliers through private networks such as electronic data interchange (EDI) E-procurement has become one of the most successful applications of electronic commerce (e-commerce), having been implemented by many companies seeking better business processes (Aberdeen Group, 2001). Kalakota and Robinson (2000) have identified benefits in cost saving, improved efficiency, measurement, and single data entry; consequently, these are the

three catalysts driving growth in the e-procurement area. E-Procurement is the procedure that involves goods procurement automation by use of internet.

The adoption process face a number of challenges such as Compatibility, Integration, Adoption, and regular use by employees and lack of capacity by small suppliers, For any e-procurement initiative to be successful, there are a number of factors that an organization must critically consider early supplier involvement; staff training; users and buyers; compliance with best practices; top management support; continuous measurement of the key benefits; re-designing affected business processes and actual selection of e-procurement solution This process leads to significant reduction in both cost and time. As noted by Quinnox (2012), e-procurement is a very comprehensive phenomenon which includes making strategic initiatives and it can be used in reorganizing the entire purchasing process. Khanapuri, *et al* (2011) asserts that there are a number of requirements relating to the adoption of e-procurement system. They include technology, objectives, information, staffing, and skills of the organization. User acceptance of new information system has a critical and profound impact on the overall usage and success of the system's adoption (Succi & Walter, (1999) Venkatesh et al., 2003). Al-Ghatani and King (1999) suggested that system usage is an obvious defined measure and better indicator of information technology acceptance. According to Davis (1993), user acceptance is often the pivotal factor determining the success or failure of information system. Contributions of electronic procurement in business organizations, According to vein *et al.* (2004) contended that user acceptance and usage of a system defines the effectiveness or ineffectiveness of the system. Understanding the factors that influence user acceptance of information technology is undoubtedly of interest to both scholars and researchers in a variety of fields as well as procurers of technology for large organizations (Dillon &Morris, 1996). There are three constructs that are posited in this service quality dimension which are trust, perceived risk and perceived ease of use (Davis, 1989). The importance of trust is elevated in e-commerce because of the high degree of uncertainty and risk present in most on-line transactions. The most common definition of trust is by Mayers, Davis & Schoorman, (1995) whereby trust is defined as the willingness of a party to be vulnerable to the actions of another party based on the expectations that the other party will perform a particular action important to the trustor. This trust is conceptualized in terms of trustor's beliefs in the trustee's (suppliers) ability, benevolence, and integrity as proposed by Mayer et al. (1995).

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The level of risk perception is also a major determinant of the success of e-procurement technology. According to Ring and Van de Ven's (1994) classification, risks are both technology-driven, and thus derived from the underlying infrastructure (environmental risks), relational, resulting from the trading partner (behavioral risks). It is important for organizations to ensure that all the perceived risks are handled properly to ensure success of the e-procurement project Mayer et al. (1995). E-Procurement success is closely related to early supplier involvement. It is important to demonstrate the proposed solution to the suppliers and discuss any necessary changes, issues, and concerns such as various options in developing and maintaining supplier catalogues (Birks et al., 2001).The degree to which the success of an e-Procurement initiative can be realized may well be related to the level of e-readiness of suppliers, and appropriate communication with suppliers is therefore important (AOT, 2003). Training of staff in procurement practices and the use of e-Procurement tools are critical to the success of an e-Procurement initiative (WB, 2003). The staffs of an organization need to acquire the necessary skills that can enable them to operate effectively and efficiently while using the new e-procurement system (Davis, 1989). The most common definition of trust is by Mayers, Davis & Schoorman, (1995) whereby trust is defined as the willingness of a party to be vulnerable to the actions of another party based on the expectations that the other party will perform a particular action important to the trustor. This trust is conceptualized in terms of trustor's beliefs in the trustee's (suppliers) ability, benevolence, and integrity as proposed by Mayer et al. (1995). The level of risk perception is also a major determinant of the success of e-procurement technology. According to Ring and Van de Ven's (1994) classification, risks are both technology-driven, and thus derived from the underlying infrastructure (environmental risks), relational, resulting from the trading partner (behavioral risks). E-Procurement success is closely related to early supplier involvement. It is important to demonstrate the proposed solution to the suppliers and discuss any necessary changes, issues, and concerns such as various options in developing and maintaining supplier catalogues (Birks et al. 2001). The degree to which the success of an e-Procurement initiative can be realized may well be related to the level of e-readiness of suppliers, and appropriate communication with suppliers is therefore important (AOT, 2003). Training of staff in procurement practices and the use of e-Procurement tools are critical to the success of an e-Procurement initiative (WB, 2003).

The solution must attract end users to view e-Procurement as the preferred means by which to purchase goods and services (KPMG, 2001). The success of e-procurement also depends on communication to the users (Birks *et al*, 2001). The organization adopting an e-procurement system must be able to communicate this information to the users. Distorted communication of information may lead to failure of the system. The World Bank (2003) suggests that developing an e-Procurement system in an open environment allows it to link to other systems for interoperability and simplifies upgrading the system. Compliance with best practices equally leads to successful e-procurement. The business case processes for e-Procurement include identifying drivers, understanding the starting point, benefits, approaches, affordability, risks, and benefit realization in alignment with the business case (Birks *et al.*, 2001). The executive management team is responsible for setting the vision and goals, bringing about collective commitment for change in process and organizational structures, and formulating the policies and strategies necessary to put an e-Procurement initiative in place (WB, 2003). If the e-procurement system does not have the full support of the top management team, there is every reason for it to fail. It is important to make sure that the top management has given full support for the adoption of e-procurement. Considerable attention and support should be provided by senior management to ensure that the procurement reform has been well understood in the agency (S & A, 2003). Measurement drives behavior and is a key to making the change a success (Birks *et al.*, 2001). Establishing goals and baselines is very important. These established goals will enable the organization measure how much has already been achieved as far as e-procurement system adoption is concerned. Cost saving, improved efficiency and control, are the three catalysts driving growth in the e-procurement area. It is also believed that there is more benefit to be gained by using e-commerce for sourcing, rather than for transaction management (Kalakota and Robinson, 2000).

Supplier searching costs are reduced (Piotrowicz and Irani, 2009). Davila *et al.* (2003) thought that implementing e-procurement the firm could shorten the order fulfillment cycle time, lower inventory levels and the price paid for goods, and reduce administrative costs of procurement. Eakin (2003) argued that the benefits of e-procurement can be classified to hard benefits (such as price savings and process cost reductions), soft benefits (such as individual time freed up through more efficient processes), and intangible benefits (such as cultural change, financial approval for

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all spending, and high visibility of supplier performance). Presutti (2003) found out that e-procurement system can bring benefits to the company such as reducing time to- market cycles, reducing material and transactions costs, and reducing stock levels. Chaffey (2004) argued that the benefits of e-procurement include reduced purchasing cycle time and cost, enhanced budgetary control, elimination of administrative errors, increasing buyers' productivity, lowering prices through product standardization and consolidation of buys, improving the payment process, and improving information management.

The single point of data entry into the system is an important benefit of e-procurement. Under this system, data does not need to be entered into several systems, but is entered once only. As a result of the system adoption, data exchange with suppliers is improved document transfer is faster, and electronic documents eliminate the mistakes of data entry and transmission. Efficiency is also increased; because once the system is implemented there is no need to employ new people, even though the department has to process more orders. Analysis of historical data in the system allows the creation of approximations of delivery time from suppliers, based on historical statistical analysis of previous delivery times (Piotrowicz and Irani, 2009). With e-procurement the sales people are able to check all information needed on their computers and can answer questions immediately (Subramaniam and Shaw, 2002). As organizations evolve toward a more strategic view of e-procurement and adoption broaden in reach and deepen in scope there are increasing challenges associated with integrating different systems and applications efficiently throughout the organization (Mendoza et al. 2006). Problems with integration to backend systems, which may have incompatible platforms, are a stumbling block to many e-Procurement efforts. Some companies use multiple ERP, which may not be compatible. Suppliers need to be able to handle different e-Procurement systems customers are using. Ariba, Commerce One, for instance, each have specific formats (Bedell, 2002). Most manufacturing plants are still using decades-old equipment and parts whose documentation is paper-based and lacks the digital format necessary for e-Procurement systems (Moore, 2003).

Although advances have been made in search technology to address nomenclature issues, inconsistencies in nomenclature for parts, between companies and even within different departments or sites of the same enterprise, often lead to costly delays and errors (Moore, 2003).

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As with any new technology introduced into the workplace, an e-Procurement system's effectiveness depends, ultimately, on its being adopted and regularly used by employees. Since e-Procurement systems are a self-service tool, end users sometimes resist using it (Bedell, 2002). Employees are said to comply with the purchase of contracted items only 65% of the time, causing companies to miss out on the 22% in cost reductions possible through compliance with contract terms (Aberdeen, 2006). Maintenance requires a wider supplier base than other business functions, and an e-Procurement system needs to provide access to a broad supplier base. Many suppliers, especially smaller ones, do not have the technological capability to integrate with e-Procurement platforms. Act 590 of Louisiana's 2008 Regular Legislative Session requires political subdivisions to make provisions for the receipt of electronic bids. LaMonica in 1999 (cited in La and Kandampully, 2002).E-procurement in the public sector is emerging internationally hence, initiatives have been implemented.

2.1.2 Non-Governmental Organization (NGO) in Kenya

Non Government Organizations came into existence through the parliamentary enactment. Non-Governmental Organizations Co-ordination Act, (1990) defines a Non-Governmental Organization (NGO) as a private voluntary grouping of individuals or associations not operated for profit or other commercial purposes but which have organized themselves nationally or internationally for the benefit of the public at large and promotion of social welfare, development, charity or research in the areas inclusive of, but not restricted to health, agriculture, education, industry and supply of amenities and services. NGOs Coordination Board is responsible for inter alia registering, facilitating and coordinating all national and international NGOs operating in Kenya; advising the government on their contribution to national development ; providing policy guidelines for NGOs to align their activities with national priorities and receiving and analyzing NGOs annual reports . Section 7 of the NGOs Act of 1990 defines the functions of the Board as: to provide policy guidelines to the NGOs for harmonizing their activities to the National Development Plan for Kenya. To receive discuss and approve the regular reports of the Council and to advise on strategies for efficient planning and coordination of the activities of NGOs in Kenya to develop and publish a code of conduct for the regulation of NGOs and their activities in Kenya.

The NGOs board categorizes NGOs in the following sectors: Welfare, Water, Youth, Gender, Environment, HIV/Aids, Agriculture, Disability, Refugees, Health, Population, Relief, Governance, Children, Micro-Finance, Informal Sector, Information and Education. There has been a tremendous growth in the number of NGOs operating in the country since the inception of the NGOs Act of 1990. The sector recorded a significant growth between 2001 and 2007 which could be attributed to the impact of globalization and the opening up of democratic space in Kenya. The impact of globalization and the opening up of democratic space in Kenya has further contributed to an expansion in NGO sector activities in Kenya and the past one year has witnessed growth in the number of international NGOs seeking registration as well as in their activities. The foregoing situation means that the NGOs Board has to constantly improve service. The performance of the NGO's

2.2 Review of Empirical Literature
2.2.1   Contributions of Electronic Procurement

Chang and Wong (2010) examined firm motivations for adopting e-procurement for their operations in the marketplace and measured their performance to assess its benefits. Trust was considered as a moderating variable between the relationship of e-procurement adoption and e-marketplace participation. A two-stage analysis, including both a qualitative and quantitative approach was applied. Hypotheses were developed and a model constructed. A research questionnaire was developed and distributed followed by data analysis and testing. The results showed that firms that adopted e-procurement were more likely to participate in the e-marketplace and that the firm's performance was enhanced after such participation. Trust was shown to have a moderating effect upon firm willingness to adopt e-procurement when it was considering participation in the e-marketplace.

Though this study focused on the motivations for adopting e-procurement and applied both qualitative and quantitative approaches, the present study concentrated on the effect of e-procurement processes on the performance of organizations and applied quantitative approach.

Kipyego (2012) studied factors affecting implementation of electronic procurement system in the public sector, costs associated with the Implementation of e-procurement were found to have a direct impact on the Organizations. The study further established that training of users and

management's support has a positive impact on the implementation of the e-procurement system; Turnover of the employees' required continuous training for the incoming staff; Formal recognition backed by legislation of the electronic procurement transactions should be encouraged to accelerate the' rate of implementation of the System within the public sector; Integration of the Organizations system and those of the suppliers; demonstration of the positive impact of the system and installation of linkages between all Governments agencies should be encouraged for faster implementation of the e- procurement system in public sector.

Though this study concentrated on implementation of electronic procurement system adoption on public sector, the present study focused on the effect of electronic procurement on nongovernmental organizations.

Patton *et al* (2002) undertook research on certain types of industrial purchase decisions (vendor selection in modified re-buy situations). Based on data gathered from industrial buyers randomly selected from a national list in Appalachian State and using the hypothetical scenario data-gathering technique, the major findings are that individual decisions seem to predominate in modified re-buy vendor selection decisions, that loyalty to existing suppliers have an effect on the extent of individual decision making, and that the extent of joint and individual decision making appears to be related to the size of the firm. The effect of trust and top management support for Green Supply Chain Management (GSCM) within the context of 340 buyer-supplier relationships in the United Kingdom, using an innovative research methodology that captures firms' engagement with GSCM practices and minimizes social desirability and common source biases was looked at by Hoejmose and Brammer (2012). The results showed that GSCM is relatively limited among firms in B2B markets compared to firms in B2C markets. Developing trust with supply chain partners, while also having top management support, is a crucial driver of engagement with Green supply chain management (GSCM) among firms in B2B sector but less important among firms in B2C sector. These findings provide considerable insights to managers and marketers of B2B supply chains that seek to respond to a growing interest of environmental performance of supply chain.
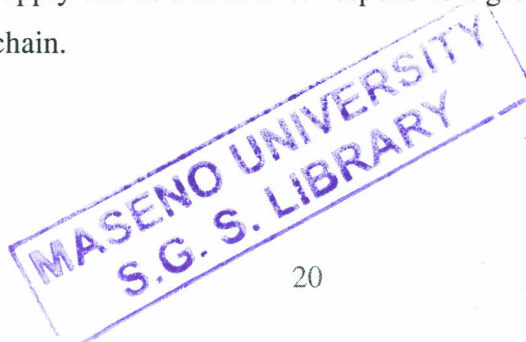
Though this study was conducted in Appalachian State and used the hypothetical scenario data-gathering technique, the current study was conducted in Kenya using real data collected from the field.

2.2.2 Non Adoption of Electronic Procurement

In another study (Gunesekaran and Ngai, 2008), divergent sectors are taken into account and a theoretical framework for the adoption of e-procurement in an organization was developed. Major components of this framework were: perceived benefits of e-procurement, perceived barriers of e-procurement, critical success factors of e-procurement adoption and perceived organizational performance with e-procurement. By using the developed theoretical framework, e-procurement adoption levels of companies from divergent areas located in Hong Kong were analyzed. According to the remarkable results of the study, 79% of the respondent companies have not implemented e-procurement systems before; however, 77% of them believe that e-procurement is important. Main reasons for not implementing e-procurement before were: Customers are satisfied with current practices (28%), Lack of adequate resources (15%), Not perceived as an advantage at all (15%), Security concerns (15%) and too costly to implement (15%). Another striking result of this study is, 67% of companies believed that successful e-procurement implementation can improve long term organizational performance, whereas 35% expect short term performance improvement from an e-procurement adoption. This means, most companies see e-procurement as a long term investment for their entities. Moreover, this study indicated that top management support and training people on information technologies are essential for the success of e-procurement adoption in organizations.

Though this study concentrated on how the divergent sectors are taken into account and a theoretical framework for the adoption of e-procurement in an organization are developed which is considered qualitative, the present study concentrated on quantitative approach of determining the effect of electronic procurement on performance of NGO's.

Gunasekaran et al. (2009) in their study "current status and readiness of a company for e-procurement" component to the theoretical framework suggested by Gunesekaran and Ngai and by using this modified version, they studied the current status of e-procurement in small and medium sized enterprises (SMEs) located in the South coast of Massachusetts. The results of this

study showed that the benefits of e-procurement were not perceived by respondent companies (only 33% of respondents believed e-procurement is important or extremely important). As a result, this study reflected the very low usage ratio of e-procurement among these companies as being very low. It promotes the understanding of a positive impact of e-procurement on organizational performance, costs, prices, market access, and information exchange with suppliers, customer service, and business growth which it recommended to companies.

Moon (2005) made a longitudinal study, since in the aforementioned study State governments' varying e-procurement tools usage ratios were asked both in 1998 and 2001. According to the results of this study, between 1998 and 2001 the e-procurement tools' usage ratios have increased, for instance, posting contract award information on the web increased from 75% to 89%; electronic ordering increased from 45% to 68%; accepting digital signature for procurement documents increased from 9% to 15%. Consequently, this study showed the increasing usage of e-procurement systems could only be seen by analyzing the three year period. However, e-procurement adoption in companies required higher levels of responsiveness, since these new technologies enable inventory reduction.

2.2.3 Electronic Procurement and Performance

Wendy van der Valk Wynstra (2012), empirically tested a theory specifying distinct ideal interaction patterns for four business-to-business service types, which differ with regard to how they are used by the buying company. The ideal interaction patterns were conceptualized as configurations of five different interaction dimensions: the key objectives in the interaction, the critical capabilities on either side of the relationship, the type of functional involvement from the buying firm and the key issues in the buyer–seller dialogue. Using a combination of quantitative and qualitative data from 23 cases of service exchange at six buying organizations in Netherlands a test of whether similarity between the ideal interaction pattern and an actual, observed interaction pattern is a continuous necessary condition for successful ongoing service exchange or not was carried out. The findings suggested for each of the four service types that, in order for a service exchange to be successful, buying companies should design their interactions with their service providers to closely resemble the specified ideal pattern for that specific service type.

In the study conducted by Min and Galle (2003), different hypotheses regarding e-procurement were developed and tested over 656 companies from divergent sectors. The most remarkable hypotheses that supported at a significance level of $\alpha = 0.05$ were "Firms that were in information intensive industry sectors were more likely to adopt e-purchasing compared to firms in less information intensive industry sectors", "The larger the number of purchasing employees, the greater the chance the buying firm will become the adopter of e-purchasing", "The buying firm who recognizes the managerial benefits of EDI or the internet is likely to adopt one or the other". This means, the sector in which companies operate, the number of employees working in purchasing activities and consciousness in terms of e-procurement advantages could affect the e-procurement tools usage ratios. However, in their study, it was found that the number of suppliers that the respondent companies had, showed there was no relation with e-procurement adoption chances' of those companies. So, it could be claimed that the technological infrastructure levels of supplier's are more serious than the magnitude of its supplier bases for a company, since having lots of suppliers lacking e-procurement systems does not express anything for the company. The public sector also tries to use e-procurement tools to improve their overall quality in purchasing transactions. To encourage e-government, many public managers have pursued e-procurement for becoming smart buyers and reaching a more qualified and accounts to procurement system.

Though this study applied longitudinal methods, the present study utilized cross sectional approach in determining the effect of e-procurement on organizational performance.

It is also mentioned in a study done by Vaidyanathan and Devaraj (2008) concerning e-procurement performance analysis, that meeting orders on time has greater impact on satisfaction than meeting orders accurately. So, after adopting e-procurement, the whole system should be managed cautiously in order to avoid shortage problems. An investigation into the implementation strategy of e- Procurement in the Irish public sector concluded that fundamental changes are required in the public sector procurement environment to achieve the benefits of e-Procurement approach. It was found that the key issues could be grouped into a number of areas: procurement framework and practices, organizational arrangement, e-Procurement technology framework, and the legal and economic environment. Burn and Robins (2003) reported a project in Western Australia that included measures of strategic initiatives, cultural readiness, learning

capacity, IT leveraging, knowledge capacity, and relationship building. This was balanced in the context of change management practice, process management practice, outcomes and performance gains. As the successful implementation of e- GP is related to the efficient planning and management of information, people, business processes, and the development of the relevant policies and plans, attention to these areas should ensure success and the achievement of e- GP's known benefits (Krishna and Walsham, 2005; Bhavnagar, 2002). Therefore, e- GP needs to be understood as a tool to underpin reform in public procurement, rather than being a technological add- on to an already complex environment (World Bank, 2006).

2.1.4. Summary of Literature

The foregoing review of literature has attempted to present a comprehensive coverage of theory and practice of electronic procurement and performance of procurement departments. The review depicts gaps in methodologies, context and objectives that this present study sought to address.

Methodologically, Min and Galle (2003), applied longitudinal methods, the present study utilized cross sectional approach in determining the effect of e-procurement on organizational performance. Moreover, the study by Gunesekaran and Ngai, 2008 concentrated on how the divergent sectors are taken into account and a theoretical framework for the adoption of e-procurement in an organization are developed which is considered qualitative, the present study concentrated on quantitative approach of determining the effect of electronic procurement on performance of NGO's

Contextually, Patton *et al* (2002) conducted their study in Appalachian State and using the hypothetical scenario data-gathering technique, while the present study was conducted in Kenya using primary data collected from the field.

By objective, Kipyego (2012) concentrated on implementation of electronic procurement system adoption on public sector, while the present study focused on the effect of electronic procurement on nongovernmental organizations.

Taken together, the foregoing research gaps suggest the reasons for the widespread equivocal results in the research on the link between electronic procurement and the performance of procurement departments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1.1 Introduction

This chapter describes the methodological approach that was used in achieving the objectives of this research study. The research design is provided and enumerates the sample and the population of the study. An explanation of the procedures used to obtain the data and how these data was presented and analyzed is given.

3.1.2 Research Design

The study utilized descriptive and correlation designs. Descriptive design provides the general description of the overall summaries of the responses while correlation design provides the existing strength and direction of the relationship between the variables under study. The research was also quantitative in nature as it involved quantifying the existence of the relationship between various variables.

3.1.3 Target Population

According to Kombo and Delmo (2006) population is defined as a group of individuals, objects or items from which samples are taken for measurement. In this regard, this study comprised of 66 employees who are directly involved in the procurement process in the organizations out of an estimated population of 88 employees from the procurement departments of life for children welfare organizations, a pilot testing was done to 22 employees from the procurement department in the organization. According to Mugenda and Mugenda, (2003).The targeted respondents were the procurement coordinators and team leaders and top management this enhanced the smooth facilitation and easy access to information's that were given for the study

3.1.4 Sampling

The researcher used census sampling where all the 66 employees were contacted. The sample size was determined by the number of employees under the study.

3.1.5 Data and Data Collection Techniques

Both primary and secondary data was used. Primary data was collected using both structured and semi structured questionnaires while secondary data was collected from existing records of Life for Children welfare organization.

3.1.6 Reliability and Validity Test for Data Collection Instrument

The reliability of the data collection instruments was verified by the expert, the researcher's supervisors who qualified it to be reliable. The test and re-test for the validity of the instruments was done between May and June 2014 by computing Cronbach's alpha whose results was 0.846 which is a reliable or accepted indicator. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Cronbach's alpha was computed whose results was 0.846 which is accepted

3.1.7 Data Analysis

Data was analyzed using descriptive statistics. Moreover, to gauge the level of relationship between the variables under study, correlation analysis was employed. To determine the effect of electronic procurement processes on the performance both regression and correlation analysis was used that helped to obtain measure of the degree of associations of two variables. This approach was deemed appropriate since descriptive methods tend to be stronger in validity but weak in reliability whereas inferential statistics tend to be stronger in reliability but weak in Validity (Kibwage, 2002 & Odondo, 2007) Moreover, Babbie (1986) indicated that the use of both methods aids the researcher in gaining higher degree of reliability and validity.

Data collected was coded, cleaned to suit Scientific Packages for Social Scientists (SPSS) and used for the analysis; the data was presented using tables, graphs and charts. The analysis was done at a significance level of 95%.

3.1.8 Presentation

The findings of the study were presented in the form of distributions tables, percentages, and graphical analysis. From part one to part three of the questionnaires the collected data was used and analyzed to answer the research questions. The responses from the open-ended questions were coded and the mean was used for likert-scale responses to improve the presentation of the analyzed results for ease of interpretation. (Mugenda, 2003)

4.1. RESULTS AND DISCUSSION

This chapter is divided into two main sections. The first section addresses the descriptive aspects of the data such as the demography of the sample data while the second part deals with the quantitative or inferential statistics. Therefore, this chapter addressed the specific objectives of the study.

4.1.1 Demographic Characteristics of the Sample

The study targeted 88 employees of Life for Children Welfare Organization but only 66 questionnaires were filled and successfully returned. A majority of the respondents were males (68.18%) while the rest (31.82%) were female. This means that the organization has more men in the procurement department than women as shown by the figure below:
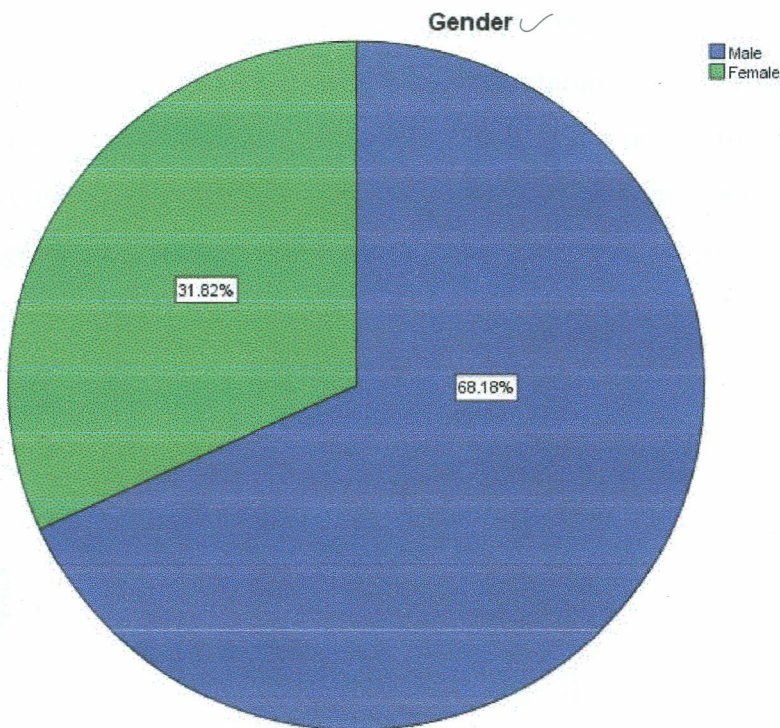

Fig.2: Analysis of gender

Table1: Analysis of job grade

Frequency	Percent	Valid Percent	Cumulative Percent
1	1.5	1.5	1.5
2	3.0	3.0	4.5
6	9.1	9.1	13.6
27	40.9	40.9	54.5
30	45.5	45.5	100.0
66	100.0	100.0	

Source: survey data 2014

From the study, it was established that the Children welfare organization gives job grades to its employees depending on academic qualifications and experience and each job grade has a defined pay scale. The findings of the study indicated that the position of directors which is the highest rank in the organization has the least number (1) which translated to 1.5% of the total responses followed by team leader (2%) and the position which had the highest number were the volunteers (45.5%). This meant that the children's welfare organization rely majorly on the contribution of trained and qualified volunteers in the field of procurement to perform some procurement functions. It was also established that the work of volunteers saves the organization huge sums of money which would have been spent on paying salaries. These are summarized in the table above:
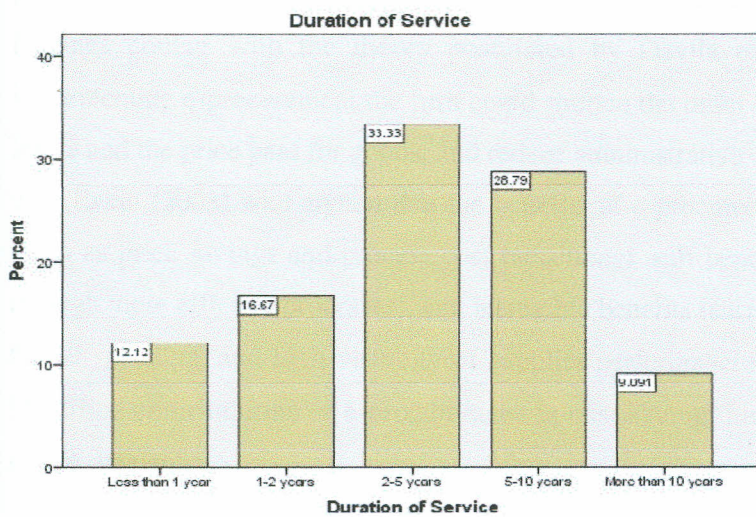

Fig. 3: Distribution of Employees by duration of service
Source: Survey data 2014

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The employees who have served between 2-5 years were the majority in the children's welfare organization comprising 33.33% of the total respondents followed by those who have served for between 5-10 years (28.79%) and the least number came from those who have served for more than 10 years (9.091%)

Table 2: Analysis of Contributions of electronic procurement

Contributions	Frequency	Percent	Valid Percent	Cumulative Percent
Increased efficiency	18	27.3	27.3	27.3
Cost savings	22	33.3	33.3	60.6
Improved transparency	16	24.2	24.2	84.8
Error free transactions	10	15.2	15.2	100.0
Total	66	100.0	100.0	

Source: Survey data 2014

The contributions of electronic procurement was assessed in terms of increased efficiency, cost savings, improved transparency in the procurement processes and free transactions which was rated in a scale of 1 to 4.The responses indicated that e-procurement greatly contributed to cost savings as evidenced by the highest response rate(33.3%) , followed by increased efficiency(27.3%), improved transparency(24.2%) and finally error free transactions (15.2%).These findings are a confirmation that the above identified contributions of electronic procurement are valid and can be generalized to other nongovernmental organizations. These findings concur with the theory postulated by Davila et al (2003) which said thought that implementing e-procurement the firm could shorten the order fulfillment cycle time, lower inventory levels and the price paid for goods, and reduce administrative costs of procurement .It also concurred with Eakin (2003) who argued that the benefits of e-procurement can be classified to hard benefits (such as price savings and process cost reductions), soft benefits (such as individual time freed up through more efficient processes), and intangible benefits (such as cultural change, financial approval for all spending, and high visibility of supplier performance).Kalakota and Robinson (2000) also identified contributions of e-procurement as cost saving, improved efficiency, measurement and single data entry.

Table 3: Analysis of causes of non-Adoption of Electronic Procurement

Causes of Non Adoption	Frequency	Percent	Valid Percent	Cumulative Percent
Insufficient donor funding	22	33.3	33.3	33.3
Mismanagement of funds	21	31.8	31.8	65.2
Organizational policy	9	13.6	13.6	78.8
Lack of Skilled personnel	14	21.2	21.2	100.0
Total	66	100.0	100.0	

Source: survey data 2014

The respondents were given a list of factors to choose independent mindedly which ones could have contributed to their non-adoption of electronic procurement practices. The frequencies indicated that insufficient donor funding was the major hindering factor in the endeavor by the children's welfare organization to adopt electronic procurement (33.3%).The other factor which also contributed greatly to non-adoption of electronic procurement by NGO's emerged to be mismanagement of funds which had a response rate of 31.8%. It also emerged that organizational policy least contributes to Ngo's non adoption of electronic procurement. These concurred with the findings of a study carried out by Gunesekaran& Ngai, 2008 on perceived barriers of e-procurement where they sited lack of sufficient financial resources as one of the barriers of e-procurement in organizations. It also confirms the theory of (WB, 2003) which asserted that if staff is not adequately trained, they may not be able to own the e-procurement system and this may contribute to failure

Table 4: Analysis of Challenges facing Electronic Procurement adoption

Challenges	Frequency	Percent	Valid Percent	Cumulative Percent
Change resistance	7	10.6	10.6	10.6
Corruption	11	16.7	16.7	27.3
High cost of installations	9	13.6	13.6	40.9
Fear of job loss	10	15.2	15.2	56.1
Lack of support from top management	12	18.2	18.2	74.2
Lack of adequate funds	9	13.6	13.6	87.9
Lack of supplier corporations	3	4.5	4.5	92.4
lack of skills and training	5	7.6	7.6	100.0
Total	66	100.0	100.0	

Source: Survey data 2014

The respondents identified eight challenges that their organization faces in an attempt to adopt electronic procurement which were summarized as shown in the table below. These challenges were then analyzed in terms of frequencies in which the respondents identify them. It was established that the greatest challenge is lack of support from top management (18.2%), followed by corruption (16.7%) meaning that the people tasked with the responsibility of overseeing the implementation of e-procurement end up diverting the funds allocated for the exercise to activities that enhance their personal gain and the least challenge was lack of supplier corporations (4.5%).These results are summarized in the table below:

The findings from the above table are in line with the findings of a study done by Gunesekaran & Ngai, (2008), on the perceived barriers of e-procurement which indicated that lack of adequate resources, security concerns, and cost of installation, top management support and training people on information technology are essential for e-procurement adoption. It also confirms the theories that were proposed by Khanapuri, Nayak, Soni, Sharma, and Soni (2011) which also assert that there are a number of requirements relating to the adoption of e-procurement system. They include technology, objectives, information, staffing, and skills. The above mentioned requirements make the adoption process to face a number of challenges such as Compatibility, Integration, Adoption, and regular use by employees and lack of capacity by small suppliers. For any e-procurement initiative to be successful, there are a number of factors that an organization must critically consider. They include: user acceptance of new information system; information quality; trust; risk perception; early supplier involvement; staff training; users and buyers; compliance with best practices; top management support; continuous measurement of the key benefits; re-designing affected business processes and actual selection of e-procurement solution.
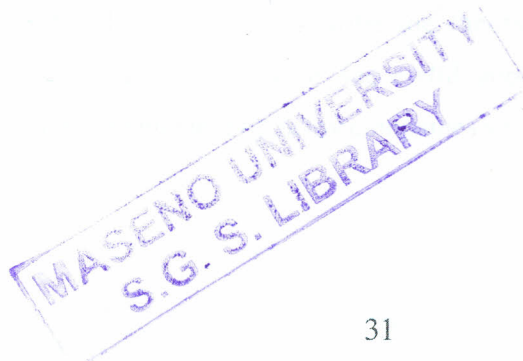
Table 5: Analysis of extent of application of electronic procurement processes

Process	N	Minimum	Maximum	Mean	Std. Deviation
E-tendering	66	1.00	4.00	2.6970	1.10898
E- buying	66	1.00	4.00	2.1364	1.06535
E- sourcing	66	1.00	4.00	2.1061	.97868
E-ordering	66	1.00	4.00	2.0303	.94413

Source: Survey data 2014

From the above results, it's evident that the most commonly used electronic procurement process by the children's welfare organization is e- tendering with a mean of 2.6970 followed by e-buying (2.1364),e-sourcing (2.1061) and finally e-ordering(2.0303).

Table 6: The correlation between electronic procurement processes and performance

	E-sourcing	E-buying	E-tendering	E-ordering	Children Enrolment	Funds received	Efficiency	Expansion of operation
Children Enrolment	.380**	.145	.016	.045	1			
Funds received	.657**	.237**	.241**	.707**	.400**	1		
Efficiency	.140**	.188**	.366**	.374**	.560	.734	1	
Expansion of operation	.224**	.163**	.060	.101	.777**	.542**	.697**	1

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

An analysis of the relationship between electronic procurement processes and performance of Life for children welfare organization showed that there is a positive and significant correlation between e sourcing and children enrolment with a correlation coefficient of 0.38. This means that when the organization sources for better services and experts in various professions, performance will positively improve. This finding confirms the theory of (Aberdeen Group, 2001) that e-procurement has become one of the most successful applications of electronic commerce (e-commerce), having been implemented by many companies seeking better business processes.

It also concurs with Kalakota and Robinson (2000) who has identified benefits in cost saving, improved efficiency, measurement, and single data entry; consequently, these are the three catalysts driving growth in the e-procurement area. On the other hand, the correlation between e- ordering, e-tendering and e- buying with children enrolment is positive but insignificant with correlation coefficients of 0.45, 0.016, and 0.145.This implies that whether these processes are enhance or not, there would be no effect on children enrolment. The correlation between e-sourcing-buying-tendering and e- ordering with funds received was positive and significant with correlation coefficients of 0.657, 0.237, 0.241, and 0.707 and 0.400 respectively. The strongest correlation existed between e-ordering and funds received. This implies that if the organization enhances the use of e- ordering in its procurement processes, more funds are likely to be donated by the donors as this is perceived to be more transparent as opposed to the manual system of ordering. The same relationship also existed between e-procurement processes and efficiency. These findings concur with earlier studies by Gebaueret *et al.* (1998) who described procurement practices (PPR) and how these positively affect procurement performance (PP) in terms of cost, time in terms of improved procurement processes, customer satisfaction, quality, stock, and value.

The relationship between e-ordering, e-tendering and expansion of operation was positive and insignificant meaning that any change or improvement of these two processes by the children's welfare organization will have negligible or no effect at all on the organization's expansion of operation. However, the correlation between e-buying and e-sourcing with expansion of operation was positive and significant with correlation coefficients of 0.163 and 0.224 respectively. This implies that if the organization invests more in these two processes, then its operation will greatly expand.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Findings

The purpose of this research was to study the effect of electronic procurement processes on the performance of non-governmental organizations in Kisumu central. To this end, the study developed a model that predicts the effect of electronic procurement processes on the performance of non-governmental organizations. The summary of findings therefore focuses on the following objectives of the study.

Objective one sought to establish the contributions of electronic procurement to the procurement departments of Non Governmental Organizations in Kisumu central. The study revealed that e-procurement greatly contributed to cost savings, followed by increased efficiency, improved transparency and finally error free transactions which were considered as strong indicators of performance in procurement departments.

The second objective of the study sought to establish the causes of non-adoption of electronic procurement practices in the non-governmental organization's procurement department in Kisumu central. The study revealed that insufficient donor funding was the major hindering factor in the endeavor by the children's welfare organization to adopt electronic procurement followed by mismanagement of funds and finally organizational policy.

The third objective of the study sought to determine the relationship between the infusions of electronic procurement processes on the performance of non-governmental organizations in Kisumu central. The study revealed that there exist's a relationship between electronic procurement processes and performances of Life for children welfare organization have a positive and significant correlation between e-sourcing and children enrolment.

5.2 Conclusion of the Study

The purpose of this research was to study the effect of electronic procurement processes on the performance of non-governmental organizations in Kisumu central. Based on the summary of the study, it can be concluded that:

Objective one sought to establish the contributions of electronic procurement to the procurement departments of Non Governmental Organizations in Kisumu central. The study concluded cost savings, efficiency, transparency and error free transactions can be attained on adoption of electronic procurement.

The second objective of the study sought to establish the causes of non-adoption of electronic procurement practices in the non-governmental organization's procurement department in Kisumu central. The study concluded that insufficient donor funding, mismanagement of funds and organizational policy are major contributors to non adoption of electronic procurement.

The third objective of the study sought to determine the relationship between the infusions of electronic procurement processes on the performance of non-governmental organizations in Kisumu central. The study concluded that there exists a relationship between electronic procurement processes and performances of Life for children welfare organization.

5.3 Recommendations

Based on the conclusion of objective one that cost savings, efficiency, transparency and error free transactions can be attained on adoption of electronic procurement. The study recommends that stakeholders should embrace electronic procurement as it leads to higher performance ratings.

Based on the conclusion of the second objective that insufficient donor funding, mismanagement of funds and organizational policy are major contributors to non adoption of electronic procurement, it is recommended that stakeholders in Non-Governmental organization should seek for more funding and embrace good management and organization's policy for efficient and effective management.

Based on the conclusion of the third objective that there exists a relationship between electronic procurement processes and performances of Life for children welfare organization, the stakeholder should ensure efficient implementation of electronic procurement so that higher performances can be attained.

5.4. Limitations of the Study

The study used a case study design covering only Life for children welfare organization which is just one non-governmental organization in Kisumu city. There are many other non-governmental organizations in Kisumu and its surrounding environments that were not incorporated in the study thus the results of the study may not be generalized to all non-governmental organizations in Kisumu County. The study also relied majorly on primary data obtained from employees of the Life for Children Welfare organization which may have led to biased opinions and hence results.

5.5 Suggestions for Further Research

Based on the foregoing conclusions on the findings of this study, the researcher suggested the following future research directions in the field relating to the electronic procurement processes and their effect on performance of non-governmental organizations in Kisumu. First, the study used cross-sectional data to answer research questions on the relationship between the electronic procurement processes and NGO's performance. It only looked at one non-governmental organization in Kisumu. Therefore, there is need to conduct a longitudinal study to provide even more conclusive evidence to the above relationship.

Secondly, future research efforts could also be focused on investigating the moderating effects of the Government policies, and NGO coordinating board regulations which were treated as intervening variables.

REFERNCES

Aberdeen Group (2001).E-sourcing: Negotiating Value in a Volatile Economy - An Executive White Paper. Boston (MA).

Aberdeen Group (September, 2006). The Maintenance, Repair and Operating Supplies Benchmark Report: Strategies for Improved MRO Spend Management.

Ageshin, E.A. (2001). E-procurement at work: A case study. Production and Inventory Management Journal, First Quarter, 48-53.

Al-Ghatanni, S. & King, M. (1999).Attitudes, Satisfaction, and Usage. Factors Contributing to Each of the Acceptance of Information Technology. Behavioral & Information Technology, 18(4), 277- 297.and Strategy Recommendation, KPMG.

AOT Consulting, 2003.Department of Treasury and Finance, Review of the GEM Purchasing E-procurement.

Archer, N. (2005) An Overview of the Change Management Process in e-Government, International Journal of Electronic Business, **3**, 1, 68-87.

Baily, P. J. H. (2008). Procurement principles and management. Harlow, England: Prentice Hall Financial Times. pp. 394.Bank, Washington, DC.

Batenburg, R. (2007). E-procurement adoption by European Firms: A quantitative analysis. Journal of Purchasing & Supply Management, 13, 182-192. doi:10.1016/j.pursup.2007.09.014

Birks, C., Bond, S. & Radford, M. (2001).Guide to e-Procurement in the Public Sector: Cutting through the Hype. London, UK: Office of Government Commerce, HMSO.

Chaffey, D. (2004). E-business and e-commerce management: strategy, implementation and practice. 2nd edition. Financial Times Prentice Hall.

Croom, S. & Brandon-Jones, A. (2004)."E-Procurement: Key issues in e-Procurement adoption and operation in the public sector", 13thInternational Purchasing & Supply Education & Research Association (IPSERA) Conference, April 4-7, Catania, Italy. Czeck Republic, 2003, pp. 228-233.

Dai, Q. & Kauffman, R.J. (2001). "Business Models for Internet-Based E Procurement Systems and B2B Electronic Markets: An Exploratory Assessment." A paper presented at the Thirty-Fourth Annual Hawaii International Conference on Systems Sciences, January 3-6, Maui, HI.

Davila, A., Gupta, M., & Palmer, R. (2003). Moving procurement systems to the internet: The adoption and use of e-procurement technology models. European Management Journal, 21, 1, 11-23. doi:10.1016/S0263-2373(02)00155-X

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of Information technology.MIS Quarterly. 13(3), 319-339.

Davis, F.D. (1993). User Acceptance of information technology: System characteristics user perceptions and behavioral impacts. International Journal of Man-Machine Studies, 38, 475- 487.

De Boer, L., Harink, J. and Heijboer, G. 2002. 'A conceptual model for assessing the impact of e procurement on performance.

Eakin, D. (2003). Measuring e-procurement benefits.Summit : Canada's magazine on public
    sector purchasing. Available at:
    http://www.summitconnects.com/Articles_Columns/PDF_
    Documents/060104.pdfEconomics, (90:1), 2004, pp. 79-102. economics-based
    analysis of electronic markets". Journal of Supply Chain Management.Vol 37(4),
    ppe Government Conference, EGOV, 2003, R. Traunmüller (ed.), Prague,
    electronic procurement'. European Journal of Purchasing and Supply
    Management, 8(1): 25-33.

Government of Kenya (GoK) (1990). The NGO coordination Act, 1990. Nairobi: Government
    Printing Press

Gunasekaran, A., & Ngai, E.W.T. (2008). Adoption of e-procurement in Hong Kong: An
    empirical research. International Journal of Production Economics, 113, 159-175.
    doi:10.1016/j.ijpe.2007.04.012

Gunasekaran, A., McGaughey, R.E., Ngai, E.W.T., &Rai, B.K. (2009).E-procurement adoption
    in the Southcoast SMEs.International Journal of Production Economics, 122, 161-
    175. doi:10.1016/j.ijpe.2009.05.013 in E-Government," in Proceedings of the
    Second International

Kalakota, R., and Robinson, M. (2000) e-Business: A Roadmap for Success. Reading, MA.
    Addison-Wesley.

Kalakota, R., Robinson, M. (2000), "e-Business 2.0: Roadmap for Success", MA: Addison
    Wesley, New York.

Kawalek, P., Wastell, D. and Newman, M., "Problematisation and Obfuscation Khanapuri, V. B.,
    Nayak, S. Soni, P., Sharma, S. Soni, M. (2011) Framework to Overcome
    Challenges of Adoption of E-procurement in Indian Context, International
    Conference on Technology and Business Management March 28-30, 208.

Khanapuri, V. B., Nayak, S. Soni, P., Sharma, S. Soni, M. (2011) Framework to Overcome Challenges of Adoption of E-procurement in Indian Context, International Conference on Technology and Business Management March 28-30, 208.

Kipyego, M. I. (2012) Factors affecting implementation of electronic procurement system in the public sector: a case of National Aids Control Council, Masters Thesis, Kenyatta University.

Klakota, Robinson, F. (2000) "Electronic concepts and applications of B2B procurement ", 3rdeditin, West Publishing company, United States of America, pp.730.

Kothari, C. R. (1993). Research Methodology. New Delhi: Willy Eastern Limited. India.

KPMG, 2001. University of California Office of the President System Wide E-Procurement Assessment

Larsen, M. H., Henriksen, H. Z. And Bjørn-Andersen, N. (2002) 'A Managerial Perspective on Implementation of E-Business Models,' Proceedings Of The 2nd Wuhan International Conference On E-Business, Whiceb 2002, L. Jiyan And L. Liu (Eds.), Whuan, China, 363-377.

Lee, S. and Lim, G.G. The Impact of Partnership Attributes on EDI Implementation Success, Information & Management, 42 (30), 2005, pp. 503-516.

Mayer, R.C., Davis, J. H. &Schoorman, F. D. (1995).An Integrative Model of Organizational Trust.The Academy of Management Review.20(3), 709 -734.

Mendoza, L.E., Pérez, M. and Grimán, A. (2006) Critical success factors for managing systems integration Information Systems Management Spring 56-75.

Min, H., & Galle, W.P. (2003). E-purchasing: profiles of adopters and nonadopters. Industrial Marketing Management, 32, 227-233. doi: 10.1016/S0019-8501(02)00266-3

Moon, M.J. (2005). E-procurement management in state governments: Diffusion of e-procurement practices and its determinants. Journal of Public Procurement, 5, 1, 54-72.

Moore, J. (April 1, 2003). "E-Procurement Pays Its Own Way: Strategic Sourcing and e-Procurement Transform Purchasing in DeKalb County, GA." FCW.COM

Moore, J. 2003. "Manufacturers struggle with e Procurement, but still see gains" Chemical Engineering

Mugenda,O.M and Mugenda, A.G. (2003); Research Methods, Quantitative & Qualitative Approaches, African Centre For Technology Studies, ACTS press, Nairobi, Kenya National e-Procurement Project (NePP) (2004). Delivering e-Procurement: Guidance

National Statistic Bureau.(2001). Poverty Alleviation in Rural Kenya Monitoring Report, Kenya Bureau of statistics report.Government printing press.

Nelson, K., Moody P.E., & Jonathan, S. (2001).The Purchasing Machine, How the Top Ten Companies Use Best Practices to Manage Their Supply Chains. The Free Press, UK

Njoroge . K. K. (2011) Factors Influencing E-Procurement Practices in Construction Industry in Kenya. Jomo Kenyatta University of Agriculture and Technology

Panayiotou, N. A., Gayialis, S. P. and Tatsiopoulos, I. P., "An E-Procurement Patton III, W.E., Puto, C.P., & King, R.H. (2002). Which buying decisions are made by

individuals and not by groups? Industrial Marketing Management, 15 (2), 129–138

Pikkarainen, T., Karjaluoto, H., &Pahnila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. Internet Research. 14 (3), 224 – 235.

Piotrowicz, W. and Irani, Z.(2009) Analysis B2B Electronic Procurement Benefits – Information Systems Perspective, European and Mediterranean Conference on Information Systems 2009.

Presutti, W.D. 2003. 'Supply management and e-procurement: creating value added in the supply

PricewaterhouseCoopers (2002), "A brief overview of the industrial manufacturing sector in Kenya" PricewaterhouseCoopers International Limited (PwCIL).Process, Organization, and Industry Conditions, A PhD thesis, University of Illinois, Ubana, ILProcurement Business System, AOT Consulting Pty Ltd, Perth..Procurement Pilot Project, Version 1.2, Australia, Februaryprocurement: enhancing buying center structure and process." Journal of Business and Industrial Marketing.

Quinnox, (2012).E - Procurement the Future of Supply Chain.Retrieved on April 2, 2012 from TechRepublic.

Ring, P. S. & Van de Ven, A. H. (1994). Developmental processes of cooperative inter organizational relationships. Academy of Management Review. 19(1), 90-118.

S&A (2003) Evaluation and Review of the e- Procurement Pilot Project, Version 1.2, Department of Premier & Cabinet Final Report: Australia, February.S&A, 2003. Department of Premier & Cabinet, Final Report: Evaluation and Review of the e- Silverman, D. (1993). Interpreting qualitative data: Methods for analyzing talk, text and Interaction. London: Sage.

Singer, T. (January, 2003). "MRO eProcurement: Where Is It Now?" Plant Engineering.www…pqdweb?TS=1045443175&RQT=309&CC=2&Dtp=1&Did= 000000278488351&Mtd=1&Fmt

Subramaniam, C. 2003. Value and Impact of B2B Electronic Commerce on Organizations: Subramaniam, C. and Shaw, M.J. 2002. 'A Study of the Value and Impact of B2B E-commerce: The Case of Web-Based Procurement'. International Journal of Electronic Commerce, 6(4): 19-40.

Succi, M., & Walter, Z. (1999).Theory of user acceptance of information technologies: an examination of health care professionals, Proceedings of the 32nd Hawaii International Conference on System Sciences (pp. 1-7). IEEE: USA. System for Governmental Purchasing,"International Journal for Production

Venkatesh, V.; Morris, M. G.; Davis, G. B. & Davis F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly. 27(3), 425-478. Vol 17(2), pp 151-166

World Bank, 2003. Electronic Government Procurement (e-GP), World Bank Draft Strategy.