

**E-TENDERING AND PERFORMANCE OF SOMALI RELIEF AGENCIES**

**BY:**

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**2016**

**DECLARATION**

I declare that this research report is my original work and that it has not been presented for award of a degree or diploma in the University of Nairobi or any other University

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This research report has been submitted for examination with our approval as a University Supervisors.

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## **DEDICATION**

This project is dedicated to my parents who have taught great values and that i can accomplish any task with hard work, my wife and young daughter who give me encouragement to work hard daily and my friend Peter who is always a great source of inspiration and has supported me all the way since the beginning of my project.

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## **ABSTRACT**

The study of E-tendering is gaining tract in the modern world due to advancements in ICT and technology. As the world becomes more globalised, so does the need to communicate faster and be more flexible arise.

E-Tendering has been accelerated to improve transparency in an organizations dealings. E-tendering studies have been carried out but not extensively in Humanitarian Situations that require high agility. Due to the limited studies in this very critical areas due to unexpected humanitarian disasters around the world and especially in Africa and the Middle East, I have decided to do a study on E-Tendering assessing the advantages, Challenges and the shortcomings of E-Tendering. Finally the study will come up with the recommendations and ways in which the study can be further improved.

## TABLE OF CONTENTS

<b>DECLARATION .....</b>	<b>ii</b>
<b>ABBREVIATIONS AND ACRONYMNS .....</b>	<b>ix</b>
<b>LIST OF TABLES .....</b>	<b>x</b>
<b>LIST OF FIGURES .....</b>	<b>xi</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.1.1 E-Tendering .....	1
1.1.2 Organisational Performance .....	2
1.1.3 Humanitarian Agencies in Somalia .....	3
1.2 Research Problem .....	4
1.3 Objectives .....	5
1.3.1 Specific objectives .....	5
1.4 Significance of the Study .....	5
<b>CHAPTER TWO.....</b>	<b>7</b>
<b>LITERATURE REVIEW .....</b>	<b>7</b>
2.1 Introduction.....	7
2.2 Theories of E-Tendering.....	7
2.3 E-Tendering .....	8
2.3.1 Use of E-Tendering .....	8
2.3.2 Adoption of E-Tendering.....	8
2.3.3 Importance of E-Tendering .....	9
2.3.4 Challenges of E-Tendering.....	10
2.4 Empirical Literature Review.....	10
2.5 Summary of Literature Review.....	11

2.6 Conceptual Framework.....	12
Figure 2.1 Conceptual Model .....	12
<b>CHAPTER THREE .....</b>	<b>13</b>
<b>RESEARCH METHODOLOGY.....</b>	<b>13</b>
3.1 Introduction.....	13
3.2 Research Design.....	13
3.3 Population .....	13
3.4 Data Collection .....	13
3.5 Data Analysis .....	14
Table 3.1 Summary of Analysis.....	15
<b>CHAPTER FOUR .....</b>	<b>16</b>
<b>RESULTS.....</b>	<b>16</b>
4.1 Introduction.....	16
4.2 Demographic Information.....	16
Figure 4.1 Gender of study respondents .....	16
Figure 4.2 Age of study respondents .....	17
Figure 4.3 Period of work in the organization .....	18
Figure 4.4 Highest level of Education .....	18
4.3 E-Tendering Effects on Humanitarian Organizations in Somalia .....	19
Table 4.1 E-Tendering Effects on Humanitarian Organizations .....	20
4.4 Relationship between E-Tendering and Effective Relief Aid in Somalia .....	20
Table 4.2 Relationship between E-Tendering and Effective Relief Aid .....	21
4.5 Challenges of E-Tendering on Humanitarian Organizations in Somalia.....	22
Table 4.3 Challenges of E-Tendering on Humanitarian Organizations.....	22
4.6 Effectiveness of E-Tendering in Humanitarian Organizations in Somalia.....	23
Table 4.4 Effectiveness of E-Tendering .....	23

<b>CHAPTER FIVE .....</b>	<b>24</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>24</b>
5.1 Introduction.....	24
5.2 Summary of the Findings.....	24
5.3 Conclusions.....	25
5.4 Recommendations for Improvement.....	26
5.5 Recommendations for Future Research .....	26
<b>REFERENCES .....</b>	<b>28</b>
<b>Appendix I: Questionnaire .....</b>	<b>31</b>



## **ABBREVIATIONS AND ACRONYMNS**

AAH-I	Action Africa Help- International
ARC	American Refugee Committee
CRS	Catholic Relief Services
DRC	Danish Refugee Council
IDPS	Internally Displaced Persons
INTERSOS	Humanitarian Aid Organization
IRC	International Rescue Committee
IT	Information Technology.
NGOS	Non-Governmental Organizations
RFQ	Request for Quotation
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children’s Emergency Fund
UNPF	United Nations Population Fund
WHO	World Health Organization

## **LIST OF TABLES**

Table 3.1 Summary of Analysis.....	15
Table 4.1 E-Tendering Effects on Humanitarian Organizations .....	20
Table 4.2 Relationship between E-Tendering and Effective Relief Aid .....	21
Table 4.3 Challenges of E-Tendering on Humanitarian Organizations.....	22
Table 4.4 Effectiveness of E-Tendering .....	23

## **LIST OF FIGURES**

Figure 2.1 Conceptual Model .....	12
Figure 4.1 Gender of study respondents .....	16
Figure 4.2 Age of study respondents .....	17
Figure 4.3 Period of work in the organization .....	18
Figure 4.4 Highest level of Education .....	18

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

The rise of E-Business in recent years has led to the development of new opportunities. Opportunities related to tendering such as outsourcing, joint product design; spend management and E-Tendering (Lancioni et al., 2000). Using Information Communication and Technology (ICT) as a business system has been a great spur for great changes in the operation and status of the organizational tendering process. Information Technology development has changed the way organizations and governments operate; Procurement accounts for the majority of organizational spending (Ellis, 2001).

According to (Van Wassenhove, 2006), there are more than 500 disasters accounting to more than 75,000 killings every year. More than 2.6 million people in Darfur Sudan were displaced by war and civil unrest. In Syria, more than 4 million people have been displaced by the civil war and militia groups leading to the loss of more than 800,000 lives

Humanitarian organizations are non-profit entities dedicated to provide assistance to the less fortunate in society. They operate in risk prone areas and situations like as flash floods, drought, disease outbreak, war among other emergencies. The Primary objective is accountability, value for money, enforcing fair competition among suppliers, achieving supreme efficiency and effectiveness and integrity. They have different goals as compared to private organizations whose major aim is profit (Diehl and Frederking, 2001).

Humanitarian employees always have a challenge of the basics required for robust and timely delivery of relief aid (Balcik and Beamon, 2008). Forecasting should be on point and items arrive when required relying on historical data. E-tendering effectiveness is required as it assists on the picking of order and re-orders periods.

#### **1.1.1 E-Tendering**

E-Tendering is a word highly confused by various researcher researching on Procurement and tendering (Betts et al., 2006). Whereas terms “E- Procurement” and “E-Tendering” have been used within the same scope, the term procurement has a larger scope. Procurement is defined as use of joined ICT to request offers for an undertaking and take singular or all stages of the procurement process including search, sourcing, concession, ordering, receipt, and post-purchase

analysis. Whilst e-Commerce is simply a business transaction conducted via electronic data interchange, e-Tendering is the digitisation of tendering processes through electronic systems, especially online (Croom and Brandon-Jones, 2004).

Forecasts, relating to the amount of business conducted digitally have hit hundreds of billions of dollars, with little doubt that the emergence of the Internet is ‘revolutionizing’ business access to communication and information. Digital enterprise activities within Australia, for example, are forecasted to greatly increase in the coming ten years (Doelman et al., 2001; Anumba and Ruikar, 2002). Subsequently, increased familiarity, awareness and successful implementation of innovative systems and processes - such as digital/ web-based tendering (e-Tendering) - raises great expectations regarding their contribution towards ‘stimulating’ the globalization of electronic procurement activities, and improving overall business and project performances throughout the construction industry sectors and overall marketplace (Doelman et al., 2001). This paper identified the benefits and challenges to the adoption of e-Tender systems and considers future industry trends and recommendations.

### **1.1.2 Supply Chain Performance**

A supply chain shows movement of goods from the supplier to the final consumer (Kondi Kondi, 2013). The measurement of performance in humanitarian supply chains has become vital for all organizations involved in disaster management (Beamon and Balcik, 2008). Logistics being central to relief activities, has meant the authors have defined a performance system focusing on humanitarian supply chains during both disaster situations and development. System can be used as a basis to measure performance of humanitarian organizations in terms of response time, service quality, and technical and cost efficiency. It is important to specify that the indicators are relative to one specific project in which the humanitarian organization is involved.

The humanitarian supply chain covers procurement, transportation, warehousing, inventory management, tracing and tracking, bidding and reserve bidding, reporting and accountability aimed at addressing emergencies. As such, it involves the sequence flow of relief aid from donor to the beneficiaries (Beamon and Balcik, 2008). It is important to have a digital tendering process that coordinates and manages a disaster in a way that the ultimate goals and objectives of the humanitarian agencies are achieved. Thus, a detailed and advanced e-tendering system is required. The humanitarian e-tendering system would ensure that even during emergencies,

humanitarian organizations receive value for money in the tendering process for goods and services supplied (Doelman et al., 2001).

E-tendering system ensures flexibility and suppliers prices can change depending on the economic levels of the tendering country. Therefore, majority humanitarian supply chains are global, clearly unpredictable, turbulent, requiring lots of flexibility, rapidity, and acceptable e-tendering system (Croom and Brandon-Jones, 2004). There are 2 major factors determining the quality of humanitarian relief supplies. Firstly is the type of disaster since the different crisis has distinct effects on the population. Health-related disasters are critical and require the highest level of attention to detail. Quality is therefore critical. Secondly is the availability in national inventories prior to disaster occurrence (Thomas, and Kopczak, 2005). Many Humanitarian agencies have embarked on e-tendering to reduce the total purchasing and ownership costs. In the recent past, donors pledging millions of dollars in aid and relief goods have put great pressure on humanitarian organizations to prove and show that they meet their objectives efficiently and effectively. Donors are therefore becoming skeptical and more involved as pertains to expenses incurred by humanitarian agencies. They will therefore monitor the full procurement cycle and the impact of their advanced aid to these humanitarian organizations (Tomasini & Van Wassenhove, 2009).

### **1.1.3 Humanitarian Agencies in Somalia**

The below Humanitarian agencies are the most common in Somali; UNHCR, CRS, DRC, INTERSOS, AAH-I, ARC, UNICEF, IRC, WHO and UNPF. Activities involved include health care, mother and child medical care, food aid and relief, family planning, immunization programmes overall and health care, education, clean water supply and sanitation. The 1951 United Nations resolution and the refugee convention, UNHCRS mandate, is the protection and assistance of displaced refugees both internally and from other countries. Lately, UNHCR has been bestowed with the responsibilities of ensuring that it protects and supports Internally Displaced Persons (IDP's) (Menkhaus, 2007). In addition to leading refugees response to emergencies, UNHCR also strives to achieve the effectiveness of its interventions and the resilience of outcome by building partnerships with other United Nations bodies and by coordinating its actions in complex emergencies.

The crisis in Somali resulted due to the major military confrontation between warlords and terrorist organization Al-Shabaab affecting citizens now displaced in their own country.

Somali Country is generally a very arid country making it prone and vulnerable to drought frequent and regular disease outbreaks such as cholera. The militants group activities have resulted into killings and displacements of other people across the border across its border eg in Kenya North Eastern. Amnesty International's August 2006 report states that the Al-Shabaab militant group launched over 7,000 air attacks on approximately 7,000 targets during the conflict. Damage caused to civilian infrastructure was just but significant.

## **1.2 Research Problem**

The principles governing organization's operations in an emergency situation include but are not limited to the following: ensuring quickfire response to mitigate suffering and loss of lives, neutrality and non-partisanship in the assistance process, and operating in a cost-effective and efficient manner based on the available limited resources. According to Du (2009), focus to the humanitarian tendering process has not been prioritised by many relief agencies while logistic skills, on the other hand, remain underdeveloped. Logistics is a very key function of any relief mission. For accountability and integrity of the whole process, it is vital for humanitarian relief agencies to evolve from the old paper tendering process into the E-Tendering system. NGOs with an effective E-Tendering system in place have benefited from integrity and accountability in all phases of its tendering process that are just and accurately documented. Timely delivery of relief aid is critical, and the system ensures that suppliers can deliver goods on time promptly as the need arises. Emergency response operations involve trade-offs of cost, agility and accuracy concerning the type of goods that are delivered and the quantities (Lou and Alshawi, 2009).

Studies carried out in addressing the difficulties faced by Logistics companies in their aid efforts. For instance, Balcik et al., (2010) looked at the challenges in coordinating humanitarian relief chains and examined some widely practiced supply chain coordination mechanisms. They however did not analyse their adaptability to the unique relief environment. Kovacs and Spens (2007) on the other hand furthered the understanding of planning and carrying out logistics operations in disaster relief. However, the study did not cover particular challenges in the planning and carrying out the operations. Tomasini and Van Wassenhove (2009) also looked at humanitarian logistics in the disaster relief areas. Nevertheless, the study did not also cover specific challenges faced by the humanitarian agencies. In addition, Van Wassenhove (2006) focused on how the humanitarian agencies are prepared in disaster relief and how the

preparedness could help them enter into partnerships. The study however failed to challenges that could hinder preparedness of the humanitarian agencies.

In addition, local studies by Nyamu (2012) focused on the challenges the humanitarian agencies are facing in general supply chain management and the effects of supply chain management on performance of these organizations. This study however did not give any solutions to the challenges. Oporo (2014) looked at the factors influencing e-procurement application at Kenya Revenue Authority. The aim of the study was able to discuss the factors but did not indicate how these factors could face challenges when it came to e-procurement application. Menkhaus (2007) and Ajzen (2011) both looked at the impact of challenges that face humanitarian organizations in Somalia and the specific challenges but failed to give solutions to the challenges faced by the humanitarian agencies.

In conclusion, majority of the studies have been on difficulties facing humanitarian relief agencies but the effectiveness of e-tendering in an emergency situation has not been looked into and has been ignored in the recent past. There are 52 NGOS In Somalia operating in disaster management and response. These various sectors where these NGOS are active include water and sanitation, education, health, poverty alleviation, conflict and peace resolution, children's rights, agriculture, population among others. What is the level of use of E-Tendering is effective in an emergency situation a case study of humanitarian and relief agencies working in Somalia?

### **1.3 Objectives**

Key purpose of the study was to assess how use of E-Tendering is affecting organizational performance of relief agencies; a case study of humanitarian agencies working in Somalia.

#### **1.3.1 Specific objectives**

The following specific objectives guided the study;

- i. Establishing the extent of the use of E-Tendering by Somali Relief Agencies
- ii. Establishing the relationship between e-tendering, adoption and performance of Somali relief Agencies
- iii. Establishing challenges of using of E-Tendering in emergencies

### **1.4 Significance of the Study**

Over the past years especially due to war and famine, Natural disasters and emergencies have placed communities and the citizenry staring at risk of property loss, diseases, famine, death, and IDPs. This means that potentially affected and affected communities will now more and more



rely on Humanitarian organizations as their primary source of relief aid. Findings of this study are hoped to be of great importance to the humanitarian relief agencies since they can relate the result of the study in ensuring that e-tendering is adapted for effective delivery of relief aid for economic growth and development. The study may also benefit relief aid employees especially the Procurement department in ensuring policies put in place to govern e-tendering system for effective delivery of relief aid.

Recipients of aid may also benefit arising from the study's findings. Through the findings and recommended actions of the study, humanitarian organizations and relief agencies will understand how effective and efficient e-tendering processes are on the supply of goods and services to the emergency environments. Economic policymakers, researchers, academicians and other scholars will benefit from the findings and recommendations of this study as they further with their studies and analysis. This study aims at assisting them gain access to relevant information in regarding the use of e-tendering on effective delivery of relief aid and required supplies. The study may also make countless contribution to the literature of the extent to which use of e-tendering is effective on the emergency situation on humanitarian agencies working in Somalia.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter aims at providing a general view of the available literature related to the study problem. It delves into the theoretical foundation guiding the study a decision of concepts and challenges.

The chapter presents the theoretical framework of the study, and the empirical review of literature based on the study objectives on the extent of the use of E-Tendering, check the performance of the using of E-Tendering and the challenges as a result of using of E-Tendering in emergency situations. Conceptual Framework will also introduced in this chapter. The chapter will conclude a summary of the entire chapter.

#### **2.2 Theories of E-Tendering**

The first theory is the social network theory identifying existence of social relationships in two forms of nodes and binds. Individual actors inside a network being referred to as nodes while the relationship between various actors is tied. Numerous forms of ties can be found within nodes.. As per Max Weber, there is the rule of fixed and administrative jurisdictional areas, which are usually ordered by rules and regulations, that is, bylaws/administrative regulations. The point summarises the existing bureaucracy in the humanitarian community and how players relate to each other especially the supply chain process, being the most visible and critical function in emergency operations. Reviewing social networks would help in find out how different entities and actors interacted in the emergency situation in Somali to come up with common goals.

The main focal point would be on the formal and informal links that the top humanitarian directors, as well as individual employees, established at different levels to meet their goals and objectives. It would also be a handy means of determining the impact that these networks had on the humanitarian operations in Somalia. Furthermore, these interlinkages would help in the grasping of ways in which humanitarian relief agencies collect information, come together for a reason such as overcoming government access barriers, and even collaborate together in set up of humanitarian topic and policies. In addition to the exercise of relational concepts helps reveal actors and their actions interdependency and how they supplement each other's efforts in practice. Collaboration amongst organizations and firms, therefore, would imply some level of interdependency among these units exist (Cunningham and Harris, 2001).

According to the Theory of Reasoned Action (TRA), behavior (e.g. acceptance of e-tendering system) of an employees is generally characterised by the behavioral intention which in turn is affected by that individual's attitude towards that behavior and qualitative norm (Montano et al., 2008). An individual's thinking of the anticipation that a given trait should to be performed is the qualitative norm. In the IT domain, Davis et al., (1989) supported the validity of TRA in forecasting computer technology acceptance (behavior) through character intentions. The Theory of Planned Behaviour (TPB) is an extension of the TRA with the inclusion of another cause of behavior, conscious character control. Conscious Character control refers to the individual's ability of ease or difficulty of conducting the character of interest. In the situation of IT usage, it refers to ability of internal constraints (e.g. self-efficacy) and outside limitations such as facilitating conditions on behavior (Ajzen, 2011).

## **2.3 E-Tendering**

### **2.3.1 Use of E-Tendering**

The use of Information Communication and Technology (ICT) as a business system has been a precipitant for enormous changes in the operation and levels of the organizational tendering process. Information Technology progression has changed the way institutions and governments operate. According to Nelson et.al, Procurement consists for the majority of organizational or institution spending (Ellis, 2001). Humanitarian agencies have taken up to E-tendering to reduce the total ownership costs. In recent past, donors that pledge millions in aids and goods have put immense pressure on humanitarian organizations to prove that that they meet their objectives in the most efficient and effective manner. As such, donors are becoming unconvinced and more involved especially when it comes to purchases borne by humanitarian agencies. Thus, they monitor the procurement processes and the impact of their advanced aid to these humanitarian organizations (Van Wassenhove, 2006). This has forced humanitarian organizations to be more efficient and effective in their operations by proving some significant levels of integrity and responsibility.

### **2.3.2 Adoption of E-Tendering**

A sophisticated emergency usually involves a enormous and quick displacement of people. Such is due to violence resulting from ethnic extermination or genocide. During sophisticated emergencies, humanitarian relief aid can become caught up in the politics of the affected environment, including competition among agencies, communication breakdowns, and

synchronisation gaps. Sudan (Darfur and South Sudan) and the Tsunami response in rebel-held areas of Indonesia, Sri Lanka, and Lebanon are the most recent examples of sophisticated emergencies (Rietjens, 2006).

For efficient distribution of humanitarian supplies by relief aid workers, then the use of e-tendering is a critical factor that has to be put in place. This ensures that issues associated with the delivery of services in times of emergency are well taken care of. Thus, e-tendering ensures that both the recipients and donors are satisfied with the whole humanitarian relief aid being put in place.

### **2.3.3 Importance of E-Tendering**

Humanitarian agencies just like profit-making organizations have to minimize operating costs while at the same time maximizing their overall output. It is the duty of humanitarian organization managers to ensure that good and service providers do not charge exaggerated prices for their deliveries. An effective and efficient e-tendering system helps the organization to shortlist and easily select suppliers who are cheaper than the others since the tender quotations are done online prior to delivery. The e-tendering costs reveal any hidden cost and compliance and adherence to regulatory authorities of the governing country. This section, therefore, covers the effect of e-tendering during emergencies on the costs of goods and services delivered, factors affecting costing pricing and the challenges faced in supplier pricing implementation policies (Oporo, 2014).

According to Low and Lamb (2000), costing of goods and service is one of the most practically hard and politically sensitive areas for any organization is it public, private or humanitarian. As such, it is very critical for managers to make considerable decisions in regards to the cost of goods and services purchased. In deciding the most suitable prices that NGOs are willing and able to provide; the management should focus more on best pricing principles. In the quest of suppliers to establish a cost, the pricing method should be one that is so close to the upper limit amount humanitarian agencies are willing to receive as a cost effective price. It should be flexible in that it should give space for discounts and other offers in line with the Financial practices of the NGOs. The costs of goods and services can help ascertain the financial performance of the humanitarian organization (Walker and Harland, 2008).

### **2.3.4 Challenges of E-Tendering**

In developing countries, e-tendering practitioners in the humanitarian organizations have always faced great limitations. Somalia is a very hostile country, and humanitarian agencies working in this environment can confirm the statement. Humanitarian organizations develop toward a more strategic view of e-tendering and accepting wider in accomplish and greater in coverage there are rising challenges linked to merging different systems and applications efficiently all over the organization. Still, uses of e-tendering during emergency situations face various challenges. Despite the many advantages provided by the use of e-tendering, humanitarian organizations, meet further some challenges when adopting such systems. Challenges with integration to backend systems, which may have unsuited platforms, are a barrier to many e-tendering efforts. Some organizations uses various software systems, which may not be compatible. Suppliers need to be able to handle different e-tendering systems humanitarian agencies are using Ariba, i2, Commerce 1, for instance, each has specific formats (Walker and Harland, 2008).

No system is introduced without challenges. The limitations and challenges experienced in the implementation of e-tendering on quality goods and services supplied includes; expensive set up cost, lack of technical expertise, poor supplier relationship, perceived lack of real comprehensive legal framework, lack of aligned data format and lack of e-tendering skills. From the foregoing it is clear that e-tendering in humanitarian organizations working in Somalia plays a major role in facilitating the quality of goods and services is upheld in line with the vision and mission statement, goals and objectives of the organization (Croom and Brandon-Jones, 2004).

### **2.4 Empirical Literature Review**

Many governments have introduced strategies to come up with an e-government infrastructure that is intended to allow citizens and government agencies to interact electronically (Anderson, 2006). Within organizations, information technology implementation decisions are often made at the departmental level, with each department choosing technologies and solutions based on its own needs and beliefs (Erasala and Yen, 2002). These applications are often not developed in a synchronised way but have evolved as a result of the latest technological innovation (Themistocleous et al., 2001). In most of the cases the programs are written in different computer languages, compiled on different platforms, run on different hardware and have different data structures, types and formats. They function independently and do not share their data. As a

result, the IT infrastructure in such organizations consists of a number of autonomous and heterogeneous solutions, which cause integration problems.

Pricing of goods and service is one of the most technically difficult and politically sensitive areas for any organization whether public, private or humanitarian. As such, it is very crucial for managers to make substantial decisions in regards to the price of goods and services procured (Van Wassenhove, 2006). Myriads of professional, ideological, economic and political arguments influence the pricing decisions. E-Procurement has been on the political agenda throughout most countries in the world. Despite awareness of potential efficiency gains of IT in public procurement functions, political-structural factors slow down the adoption process (Henriksen et al, 2004). While the awareness of economic factors stressing efficiency of e-procurement is a necessary condition for the adoption process, enabling faster adoption requires considering and addressing political-structural factors that are specific to a particular political and administrative context.

According to Balcik et al., (2010), a number of the challenges face humanitarian organizations in coordinating humanitarian relief chains. Kovacs and Spens (2007) and Tomasini and Van Wassenhove (2009) also studied humanitarian logistics in the disaster relief areas and obtained similar results as Balicik et al., (2010). Van Wassenhove (2006) determined that humanitarian agencies are not well prepared in disaster relief and therefore they needed to be prepared to help them enter into partnerships. In addition, Oporo (2014) looked at the factors influencing e-procurement application at Kenya revenue authority. Thou the study was able to discuss the factors affecting e-procurement in supply chain performance, it did not indicate how these factors could face challenges in e-procurement application. Menkhaus (2007) and Ajzen (2011) studied humanitarian agencies in supply chain performance but did not give a clear link between e-tendering and supply chain performance, which necessitated this study.

## **2.5 Summary of Literature Review**

Empirical evidence shows that no studies on e-tendering have been done within humanitarian relief agencies in Somalia. Studies therefore need to be done to reduce this opening. Also, relating to systems integration as well, there is no empirical evidence to indicate whether or not studies that examine systems integration within NGOs have been done. Lastly, most of the studies done tend to touch more on business organizations that are profit-oriented as opposed to non-profit ones like humanitarian relief organizations. These provide significant gaps in research

and in particular for comparison purposes. Consequently, it is in this background the researcher contemplated the need to explore further and document the same for use in academia and practice (Kondi Kondi, 2013). The study was motivated by the fact that very little has been done in addressing the challenges that logistic companies face during relief aid efforts. Donors, on the other hand, disallow occurrence of some expenses or withdraw entirely from advancing their funds to such organizations.

## 2.6 Conceptual Framework

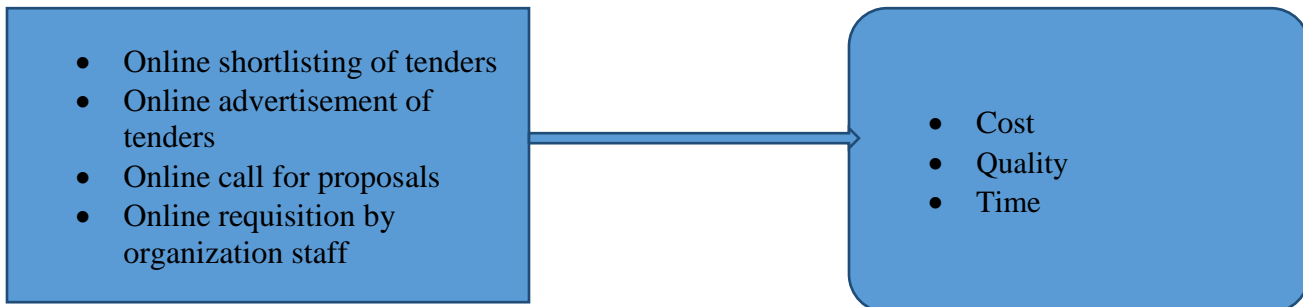
The conceptual framework below explains the independent and dependent variables and their relation to each other. The dependent variable of the study is the effective E-Tendering which will be measured in terms of online short listing of tenders, online advertisement of tenders, online call for proposals and online requisition by organization staff. The independent variables of the study were quality of E-Tendering, time of E-Tendering and cost reduction in E-Tendering. There are factors that are considered to provide a moderating effect and include infrastructure provision and political stability.

### Independent

E-Tendering Adoption

### Dependent Variables

Performance



**Figure 2.1 Conceptual Model**

Source: Researcher (2016)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Section 3 defines the research methods, research instruments and research tools used for the study while presenting the tools used for the study further describing the methods and procedures that were used in data collection and the analysis.

#### **3.2 Research Design**

The study was carried out using a descriptive survey design. Descriptive survey design allowed the researcher to collect information, summarize, present and interpret for the purpose of clarification (Orodho and Kombo, 2002). The choice of the descriptive survey research design was made based on the fact that in this study, the researcher was concerned in the state of affairs of E-Tendering in the field, and no variable was manipulated.

#### **3.3 Population**

The case study focused 11 humanitarian organizations in Somalia operating in disaster situations; by utilizing a census sampling method. These organizations were UNHCR, AAH-I, ARC, UNICEF, IRC, WHO, CRS, DRC, INTERSOS, OCHA and UNPF which are responsible for disaster management through evacuation and provision of emergency suppliers. It focused more on the staff in the procurement department. They are in most cases the first to respond to disasters in Somalia and receive needs from the various user department. United Nations Children Fund is a world leader in the procurement of supplies for children. The supply division provides rapid supply response during emergencies and also procures and supplies essential commodities on behalf of governments, and other development partners. The United Nation High Commissioner for Refugees is mandated to protect refugees and resolve refugee problems worldwide. The UNHCR is in most cases, the first to arrive when a forced displacement crisis erupts.

#### **3.4 Data Collection**

The method of study used was through primary sources of data. The primary data source was collected using a semi-structured questionnaire. Contents of the questionnaire were both open and close-ended questions. In adopting semi-structured questionnaires the researcher anticipated this would offer the respondents to air their views which are not incorporated within the research



instrument. The questionnaires were emailed by the researcher with the help of pre-trained research assistants. Through email, the researcher maximized the efficiency of collecting the data as well as ensured the respondents were well versed with the feedback being sought for the study.

The questionnaire had four sections: Section one comprised of demographic information of the respondents. Section two comprised of the extent of the use of E-Tendering by Somali Relief Agencies, section 3 entailed the relationship between e-tendering, adoption and performance of Somali relief Agencies while the fourth section comprised of the challenges of using of E-Tendering in emergencies. A Likert scale was used to capture the data. The scale ranged from strongly disagree to strongly agree. According to Mugenda and Mugenda (2003), the Likert scale is the most preferred technique to employ in quantitative research to determine the respondent's level of agreement or attitudes in regards to particular statements in the questionnaire.

### **3.5 Data Analysis**

There are two fundamental approaches to analyzing qualitative data, but it's possible to handle each in a different way. These are the deductive and inductive approach. The deductive method involves drawing conclusions on individual entities based on the general pattern found. That is going from general to the particular is a deductive method. The inductive method will be used to generalize, from particularized or sample behavior (Grbich, 2012).

Descriptive statistical analysis was employed by the researcher in the course of the study to present the findings. Methods of Descriptive statistical measures that were employed included means, frequencies and standard deviations. The study adopted both qualitative and quantitative methods in data analysis. Qualitative data analysis is as much an art as a science. Unlike the analysis of numbers, there is no right way to analyze opinions, choices description, and feelings. The researcher's experience and judgment are important tools in making sense of qualitative data. It is, therefore, essential that the analysis be as rigorous as possible with methods of analysis clearly explained and evidence provided to support the conclusions.

Each of the study objectives were analyzed as shown in Table 3.1 below.

**Table 3.1 Summary of Analysis**

<b>OBJECTIVE</b>	<b>ANALYSIS METHOD</b>
To establish the extent of the use of E-Tendering by Somali Relief Agencies	Descriptive Statistics
To establish the relationship between e-tendering, adoption and performance of Somali relief Agencies	Descriptive Statistics
To establish challenges of using of E-Tendering in emergencies	Descriptive Statistics

## CHAPTER FOUR

### RESULTS

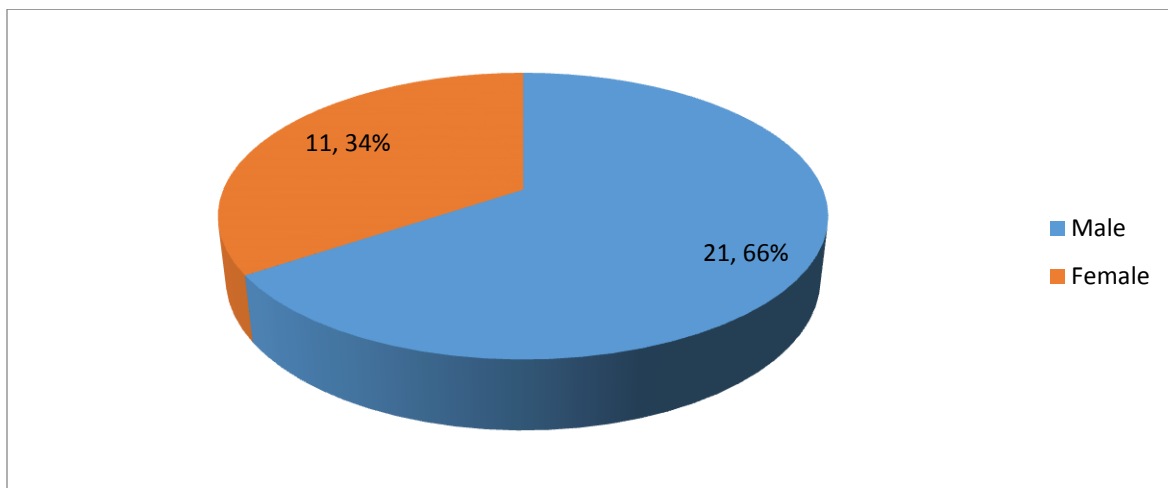
#### 4.1 Introduction

This section presents the study results of the study objectives. Demographics characteristics of the study respondents are also given. The case study focused on 11 humanitarian organizations in Somalia operating in disaster situations. These organizations are UNHCR, CRS, DRC, INTERSOS, OCHA, AAH-I, ARC, UNICEF, IRC, WHO and UNPF are responsible for disaster management through evacuation and provision of emergency suppliers. It focused mostly on the staff in the procurement department.

#### 4.2 Demographic Information

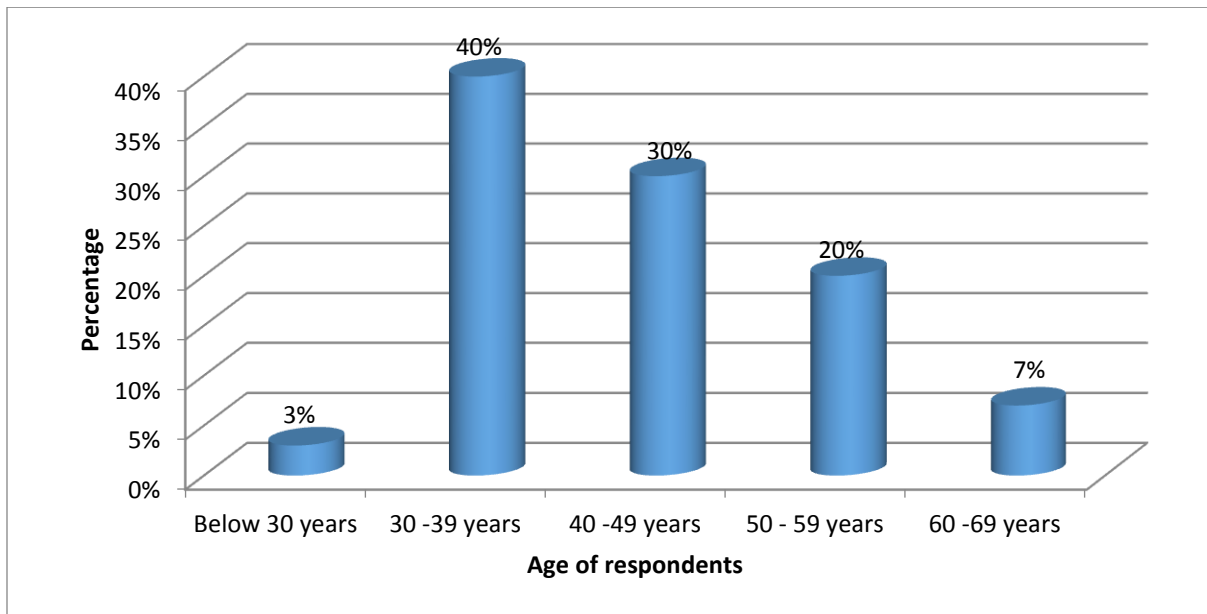
Table 4.1 presents the characteristics of the personnel who took part in the study giving information to the study. Thirty two staffs from these institutions were available for the study and their characteristics are presented below.

The study sought to determine the gender of the respondents who took part in the study. The findings obtained indicate that the male respondents were the majority with 66% (21) of the responses while the female respondents were 34% (11). This shows that the majority of the procurement staff in the Somali relief agencies were male.



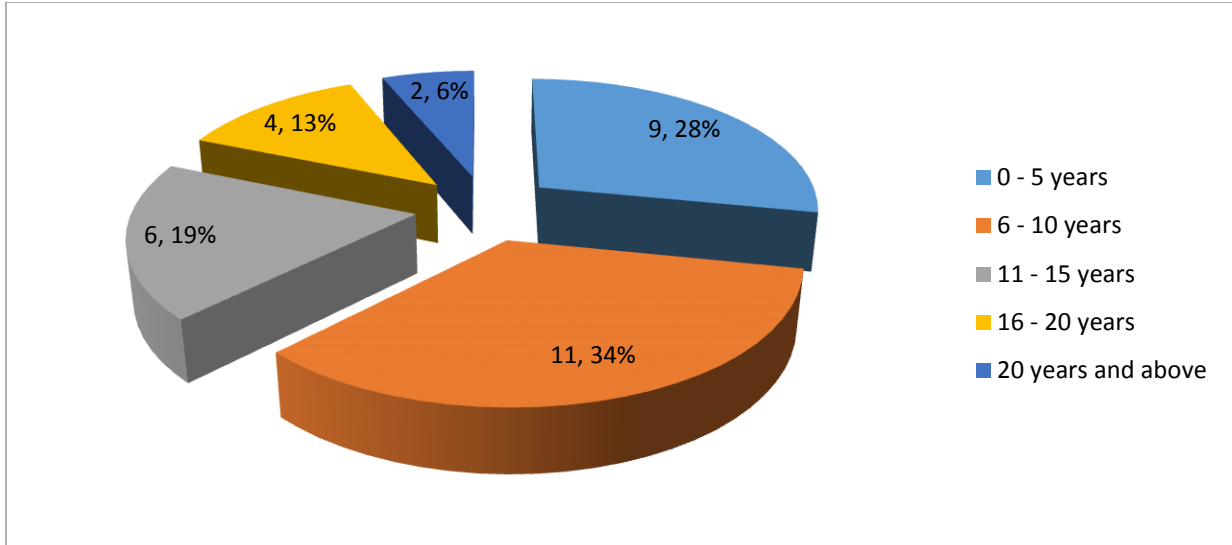
**Figure 4.1 Gender of study respondents**

The study also sought to determine the age of the respondents. The findings obtained are shown in figure 4.2 below. According to the findings, the majority of the respondents were between 30 years and 40 years forming 40% (13), followed by those who were aged 40-49 years at 30% (9), 50-59 years at 20% (6), 60-69 years at 7% (2) while those aged below 30 years were 3% (1). Figure 4.2 below gives the findings on the age of the respondents.



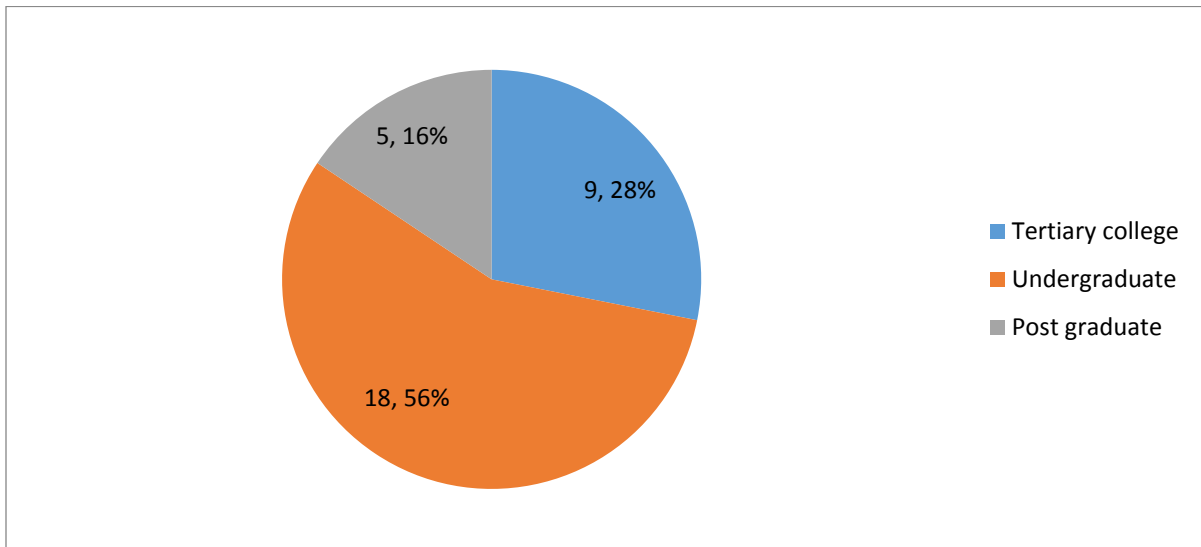
**Figure 4.2 Age of study respondents**

The study also sought to determine the period the respondents had worked in the organizations. The findings of the study reveal that the majority of the respondents had worked in the organization for 6-10 years forming 34% (11) of the responses, followed by those who had worked in the organization for 0-5 years at 28% (9), 11-15 years were 19% (6), 16-20 years were 13% (4) while those who had worked for over 20 years were 6% (2). The findings on the working period in the organizations are shown in figure 4.3 below.



**Figure 4.3 Period of work in the organization**

On the level of education, the study determined that the majority of the majority of the respondents were undergraduate degree holders forming 56% (18) of the responses, followed by tertiary college at 28% (9) of the respondents while those who were post-graduates were the least with 16% (5) of the total responses. Figure 4.4 below gives the results obtained in the study.



**Figure 4.4 Highest level of Education**

### 4.3 E-Tendering Effects on Humanitarian Organizations in Somalia

The study sought to determine the effects of E-Tendering on humanitarian organizations in Somalia. A Likert scale data was collected rating the views in a scale of 1 to 5 where 1 represents very great extent whereas 5 represent very small extent. The results from the collected responses were analyzed based on means and their standard deviations to show the variability of the individual responses from the overall mean of the responses per each aspect of effects of E-Tendering on humanitarian organizations in Somalia. The mean results are therefore given on a scale interval where a mean value of up to 1 is an indication of very great influence; 1.1 – 2.0 is great influence; 2.1 – 3.0 is moderate extent, 3.1 – 4.0 is a small extent and a mean value of 4.1 and above is an indication of very small extent. A standard deviation below 1 show that that the responses given do not vary significantly from the mean value and therefore changing the population units studied would not alter significantly the current results. The standard deviation obtained above 1 show that the responses have more variation from the mean value obtained.

According to the findings, all the variables had a great influence on humanitarian organizations except tenders being published online which had a medium influence. The findings show that specifications for procured items are posted to the organization's website ( $M = 1.37$ ,  $SD = 0.491$ ); accountability and transparency has been encouraged ( $M = 1.37$ ,  $SD = 0.491$ ); All organizations' staff make requisitions online ( $M = 1.43$ ,  $SD = 0.618$ ) and short listing of tenders is done by e-tendering system ( $M = 1.43$ ,  $SD = 0.504$ ) all had great influence on humanitarian organizations in Somalia. Further, there is improved flow of information ( $M = 1.53$ ,  $SD = 0.507$ ); there is competitive bidding and sourcing ( $M = 1.84$ ,  $SD = 0.954$ ) and call for proposals is done through the organization website ( $M = 1.96$ ,  $SD = 1.149$ ) also showed a great influence on humanitarian organizations in Somalia. However, tenders are advertised online had moderate influence on humanitarian organizations ( $M = 2.03$ ,  $SD = 0.999$ ). The findings are as shown in Table 4.1 below.

**Table 4.1 E-Tendering Effects on Humanitarian Organizations**

	N	Mean	Std. Deviation	Variance
Specifications for procured items are posted to the organization's website	32	1.37	.491	.242
Accountability and transparency has been encouraged	32	1.37	.491	.242
All organizations' staff make requisitions online	32	1.43	.618	.383
Short listing of tenders is done by e-tendering system	32	1.43	.504	.254
There is improved flow of information	32	1.53	.507	.257
There is competitive bidding and sourcing	32	1.84	.954	.910
Call for proposals is done through the organization website	32	1.96	1.149	1.322
Tenders are advertised online	32	2.03	.999	.999

#### 4.4 Relationship between E-Tendering and Effective Relief Aid in Somalia

The study sought to determine the relationship between E-Tendering use and effective relief aid in Somalia. A Likert scale data was collected rating the views in a scale of 1 to 5 where 1 represents very great extent whereas 5 represent very small extent. The results from the collected responses were analyzed based on means and their standard deviations to show the variability of the individual responses from the overall mean of the responses per each aspect of the relationship between E-Tendering and effective relief aid in Somalia. The mean results are therefore given on a scale interval where a mean value of up to 1 is an indication of very great influence; 1.1 – 2.0 is great influence; 2.1 – 3.0 is moderate extent, 3.1 – 4.0 is a small extent and a mean value of 4.1 and above is an indication of very small extent. A standard deviation below 1 show that that the responses given do not vary significantly from the mean value and therefore changing the population units studied would not alter significantly the current results. The standard deviation obtained above 1 show that the responses have more variation from the mean value obtained.

The findings of the study indicate that the majority of the study variables had a great influence on relief aid effectiveness in Somalia. Online requisition by organizational staff has improved flexibility ( $M = 1.37, SD = 0.491$ ); quality maintained ( $M = 1.40, SD = 0.498$ ); more lives saved ( $M = 1.40, SD = 0.498$ ); online short listing of tenders has ensured transparency ( $M = 1.43, SD =$

0.504) and online advertisement of tenders has ensured the NGO get competitive suppliers ( $M = 1.50, SD = 0.508$ ) all had great influences on relief aid effectiveness in Somalia. In addition, saved costs re-invested ( $M = 1.50, SD = 0.508$ ); online advertisement for tenders has improved transparency ( $M = 1.53, SD = 0.507$ ); online short listing of tenders has improved effectiveness ( $M = 1.53, SD = 0.717$ ) and E-Tendering has reduced the overall cost ( $M = 1.56, SD = 0.504$ ) all had great influences on relief aid effectiveness in Somalia. However, online call for proposals has improved flexibility ( $M = 2.00, SD = 1.016$ ); online requisition by organization staff has improved accountability ( $M = 2.09, SD = 0.892$ ); quality improvement ( $M = 2.40, SD = 1.042$ ); greater response ( $M = 2.40, SD = 1.042$ ) and online call for proposals has ensured effectiveness ( $M = 2.50, SD = 1.135$ ) all showed a moderate influence on relief aid effectiveness in Somalia. The findings are as shown in table 4.2 below.

**Table 4.2 Relationship between E-Tendering and Effective Relief Aid**

	N	Mean	Std. Deviation	Variance
Online requisition by organizational staff has improved flexibility	32	1.37	.491	.242
Quality Maintained	32	1.40	.498	.249
More lives saved	32	1.40	.498	.249
Online short listing of tenders has ensured transparency	32	1.43	.504	.254
Online advertisement of tenders has ensured the NGO get competitive suppliers	32	1.50	.508	.258
Saved costs re-invested	32	1.50	.508	.258
Online advertisement for tenders has improved transparency	32	1.53	.507	.257
Online short listing of tenders has improved effectiveness	32	1.53	.717	.515
E-Tendering has reduced the overall cost	32	1.56	.504	.254
Online call for proposals has improved flexibility	32	2.00	1.016	1.032
Online requisition by organization staff has improved accountability	32	2.09	.892	.797
Quality Improvement	32	2.40	1.042	1.088
Greater response from suppliers	32	2.40	1.042	1.088
Online call for proposals has ensured effectiveness	32	2.50	1.135	1.290



#### 4.5 Challenges of E-Tendering on Humanitarian Organizations in Somalia

The study also sought to determine the challenges of E-Tendering on humanitarian organizations in Somalia. A Likert scale data was collected rating the views in a scale of 1 to 5 where 1 represents very great extent whereas 5 represent very small extent. The results from the collected responses were analyzed based on means and their standard deviations to show the variability of the individual responses from the overall mean of the responses per each aspect of the challenges of E-Tendering in Somalia. The mean results are therefore given on a scale interval where a mean value of up to 1 is an indication of very great influence; 1.1 – 2.0 is great influence; 2.1 – 3.0 is moderate extent, 3.1 – 4.0 is a small extent and a mean value of 4.1 and above is an indication of very small extent. A standard deviation below 1 show that that the responses given do not vary significantly from the mean value and therefore changing the population units studied would not alter significantly the current results. The standard deviation obtained above 1 show that the responses have more variation from the mean value obtained.

The findings of the study indicate that there were major challenges faced by humanitarian organizations in Somalia and their influences were great. Failure to continuously measure key benefits hinders the implementation of e-tendering ( $M = 1.43, SD = 0.618$ ); poor information quality ( $M = 1.46, SD = 0.507$ ); failure to comply with best practices ( $M = 1.90, SD = 0.173$ ) and lack of proper staff training ( $M = 1.96, SD = 0.897$ ) all had great influences on by humanitarian organizations in Somalia. However, slow user acceptance of new information systems ( $M = 2.01, SD = 1.016$ ) and late supplier involvement had moderate influences on humanitarian organizations in Somalia. Results are as shown in Table 4.3 below.

**Table 4.3 Challenges of E-Tendering on Humanitarian Organizations**

	N	Mean	Std. Deviation	Variance
Failure to continuously measure key benefits hinders the implementation of e-tendering	32	1.43	.618	.383
Poor information quality	32	1.46	.507	.257
Failure to comply with best practices	32	1.90	.173	1.378
Lack of proper staff training	32	1.96	.897	.805
Slow user acceptance of new information systems	32	2.01	1.016	1.032
Late supplier involvement	32	2.18	1.090	1.190

#### 4.6 Effectiveness of E-Tendering in Humanitarian Organizations in Somalia

The findings of the study presented in Table 4.4 below show the effectiveness of E-Tendering in Somalia relief organizations. The findings obtained indicate that the effectiveness of cost of goods and services supplied ( $M = 1.40$ ,  $SD = 0.498$ ) was great, while the effectiveness of timely delivery of humanitarian aid and quality of goods and services supplied were both moderate ( $M = 2.12$ ,  $SD = 0.941$ ) and ( $M = 2.34$ ,  $SD = 0.903$ ) respectively.

**Table 4.4 Effectiveness of E-Tendering**

	N	Mean	Std. Deviation	Variance
Cost of goods and services supplied	32	1.40	.498	.249
Timely delivery of humanitarian aid	32	2.12	.941	.887
Quality of goods and services supplied	32	2.34	.903	1.007

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This section presents the summary of the findings of the study, conclusions and recommendations of the study.

#### 5.2 Summary of the Findings

The study found out that specifications for procured items were posted to the organization's website, accountability and transparency had been encouraged and that short listing of tenders was done by e-tendering system in the humanitarian organizations. Further, there was improved flow of information, competitive bidding and sourcing and call for proposals was done through the organization website. However, tenders advertised online had moderate influence on humanitarian organizations. Provision of quality goods and services to all humanitarian agency beneficiaries is the central to the government, volunteers, partners and donors for poverty eradication and economic growth strategy. To realize these goals of quality assurance in supplies, the humanitarian organizations have put in place effective assurance mechanisms through its e-tendering system.

The findings of the study also indicated that online requisition by organizational staff had improved flexibility, quality was maintained, more lives were saved, online short listing of tenders had ensured transparency and that online advertisement of tenders had ensured the NGO get competitive suppliers. In addition, saved costs were re-invested, online advertisement for tenders had improved transparency, online short listing of tenders had improved effectiveness and that E-Tendering had reduced the overall cost in Somalia.

The study however determined that online call for proposals had not improved flexibility, online requisition by organization staff had not improved accountability, quality had not been on the improvement, there wasn't greater response and that online call for proposals had not ensured effectiveness in the humanitarian organizations.

The findings of the study indicated that there were major challenges faced by humanitarian organizations in Somalia. Failure to continuously measure key benefits hindered the implementation of e-tendering, poor information quality was evident, there was failure to comply with best practices and there was also lack of proper staff training. However, there were no slow user acceptance of new information systems and late supplier involvement on humanitarian organizations in Somalia.

The findings of the study further showed that there was little effectiveness of E-Tendering in Somalia relief organizations. The findings obtained indicate that the effectiveness of cost of goods and services supplied was great, however the effectiveness of timely delivery of humanitarian aid and quality of goods and services supplied were both low.

### **5.3 Conclusions**

Based on the findings of the study, the following conclusions were made in the study.

The study concluded that tenders were not advertised online by the humanitarian organizations.

The study concluded that accountability and transparency had been encouraged in the humanitarian organizations of Somalia and that short listing of tenders was done by e-tendering system in the humanitarian organizations.

The study concluded that online requisition by organizational staff had improved flexibility, quality was maintained, more lives were saved, online short listing of tenders had ensured transparency and that online advertisement of tenders had ensured the NGO get competitive suppliers.

The study also concluded that that online call for proposals had not improved flexibility, online requisition by organization staff had not improved accountability, quality had not been on the improvement, there wasn't greater response and that online call for proposals had not ensured effectiveness in the humanitarian organizations.

Further, the study concluded that that there was little effectiveness of E-Tendering in Somalia relief organizations.

#### **5.4 Recommendations for Improvement**

Based on the conclusions of the study, the study made the following recommendations.

The humanitarian relief organizations should always ensure that there is accountability and transparency in order to ensure that the resources are used on what exactly they are meant for.

The organizations that have not adopted online requisition should adopt the style to ensure that there is improved flexibility and quality.

The humanitarian organizations should also adopt online short listing of tenders so as to ensure there is more transparency. This will also ensure that online advertisement of tenders will help the organization get more competitive suppliers.

The study determined that that online call for proposals had not improved flexibility. The humanitarian organizations can therefore work towards ensuring that online call for proposals improve the flexibility of E-Tendering in the organizations.

The organizations should also adopt ways that ensure that online requisition by organization staff improves accountability and quality.

Since there was little effectiveness of E-Tendering in Somalia relief organizations, the organizations should adopt measures such as timely delivery of humanitarian aid and quality of goods and services supplied to improve the effectiveness of E-Tendering.

#### **5.5 Recommendations for Future Research**

Despite following an exhaustive research method and carrying out rigorous data analysis, however, the study experienced limitations which serve as suggestions for future research as follows:

The study done was limited to Somalia. Therefore, the scope of generalization is limited to the study area. Therefore, the study suggests that other researchers can undertake a similar study on

e-tendering and performance of relief agencies in other countries that are require relief such a South Sudan, Burundi, Democratic Republic of Congo among others.

In addition, the study used quantitative approaches in data collection and analysis. Therefore, other researchers can undertake a similar study using qualitative approaches.

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**Appendix I: Questionnaire**

**Part A. Demographic Information**

1. Gender  
Male [ ] Female [ ]
2. Age Bracket  
Below 30 years [ ] 30-39 years [ ] 40-49 years [ ] 50-59 years [ ]  
60-69 years [ ]
3. For how long did you/have you worked with this NGO?  
0-5 years [ ] 6-10 years [ ] 11-15 years [ ] 16-20years [ ]  
20 and above years [ ]
4. What is your highest level of education?  
Secondary [ ] Tertiary College [ ] Undergraduate [ ]  
Postgraduate [ ] Other (Specify).....

**Part B. To What Extent Has Use of E-Tendering Been Effected By Humanitarian Organizations in Somalia?**

Kindly give the extent of your agreement with the following statement about the extent to which the use of e-tendering is effective in emergency situations in your organization. Use a scale of 1-5

1. Very great extent [ ] 2. Great extent [ ] 3. Moderate extent [ ] 4.Small extent [ ] 5. Very small extent [ ]

NO.	Description	1.	2.	3.	4.	5.
	Call for proposals is done through the organization website					
	Tenders are advertised online					
	All organizations' staff make requisitions online					
	There is improved flow of information					
	Specifications for procured items are posted to the organization's website					
	Short listing of tenders is done by e-tendering system					
	There is competitive bidding and sourcing					

Accountability and transparency has been encouraged					
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**Part C. What is The Relationship between Use of E-Tendering and Effective Relief Aid of Humanitarian Organizations in Somalia?**

To what extent do you agree with the following statements on a scale of 1-5?

1. Very great extent [ ] 2. Great extent [ ] 3. Moderate extent [ ] 4. Small extent [ ]  
5. Very small extent [ ]

No.	Description	1.	2.	3.	4.	5.
	Online requisition by organizational staff has improved flexibility					
	Online short listing of tenders has ensured transparency					
	Online call for proposals has improved flexibility					
	Online advertisement for tenders has improved transparency					
	Online call for proposals has ensured effectiveness					
	Online advertisement of tenders has ensured the NGO get competitive suppliers					
	Online short listing of tenders has improved effectiveness					
	Online requisition by organization staff has improved accountability					
	E-Tendering has reduced the overall cost					
	Saved Costs re-invested					
	Quality Improvement					
	Quality Maintained					
	Greater response from suppliers					
	More lives saved					

**Part D: To What Extent Does the Following Challenges Hinder Use Of E-Tendering By Humanitarian Organizations In Somalia?**

Use the scale of 1-5

1. Very great extent [ ] 2. Great extent [ ] 3. Moderate extent [ ] 4. Small extent [ ] 5. Very small extent [ ]

NO.	Description	1.	2.	3.	4.	5.
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	Lack of proper staff training					
	Poor information quality					
	Lack of management support					
	Slow user acceptance of new information systems					
	Failure to continuously measure key benefits hinders the implementation of e-tendering					
	Failure to comply with best practices					
	Late supplier involvement					

**Part E. To What Extent Has Use of E-Tendering Been Effective on the Following?**

Use the Scale of 1-5

1. Very great extent [ ]    2. Great extent [ ]    3. Moderate extent [ ]    4. Small extent [ ]  
 5. Very small extent [ ]

NO.	Description	1.	2.	3.	4.	5.
	Quality of goods and services supplied					
	Cost of goods and services supplied					
	Timely delivery of humanitarian aid					

*Thank you*