

**SUPPLY CHAIN MANAGEMENT PRACTICES AND SERVICE DELIVERY IN  
HUMANITARIAN ORGANISATIONS IN KENYA**

**BY  
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**DECLARATION**

I declare that this research project is my original work and has never been submitted to any other university for the award of a degree.

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D61/60062/2013

This project has been submitted with my authority as the University Supervisor;

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## **DEDICATION**

This project is dedicated to my son Randy who really inspired me to do this programme and my mother Lucia Ngewa for your moral, financial support and encouragement without you this could not have been possible

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I want to thank God for his Guidance that made me possible to reach this far. You have been dependable and I will forever be grateful to you.

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## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>LIST OF TABLES .....</b>	<b>viii</b>
<b>LIST OF FIGURES .....</b>	<b>ix</b>
<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>x</b>
<b>ABSTRACT.....</b>	<b>xi</b>
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background.....	1
1.1.1 Supply Chain Management Practices .....	2
1.1.2 Service Delivery.....	3
1.1.3 Humanitarian Organizations in Kenya.....	4
1.2 Statement of the Problem.....	6
1.3 Research Objectives.....	8
1.4 Value of the Study .....	9
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>10</b>
2.1 Introduction.....	10
2.2 Theoretical Framework of SCM Practices.....	10
2.2.1 Systems Theory.....	10
2.2.2 Contingency Theory.....	11
2.2.3 Resource Based View Theory.....	12
2.3 SCM Practices in Humanitarian Organizations .....	13

2.4 SCM Practices and Service Delivery in Humanitarian Organizations .....	17
2.5 Challenges Faced in the Implementation of SCM Practices in Humanitarian Organizations .....	20
2.6. Summary of Literature Review and Research Gaps .....	22
2.7 Conceptual Framework.....	23
<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>25</b>
3.1 Introduction.....	25
3.2 Research Design.....	25
3.3 Population and Sampling .....	25
3.4 Data Collection .....	26
3.5 Data Analysis .....	26
<b>CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION .....</b>	<b>28</b>
4.1 Introduction.....	28
4.2 Reliability Analysis.....	28
4.2 General Information.....	29
4.2.1 Position in the Organization.....	29
4.2.2 Period of when the NGO was established.....	30
4.2.3 Category of NGO.....	31
4.3. Supply Chain Management Practices .....	32
4.4 Relationship between Supply Chain Management Practices and Service Delivery ...	35
4.4.1 Regression Analysis.....	36
4.4.1 Coefficients .....	36

4.4.4.2 Model Summary.....	37
4.4.4.3 ANOVA .....	38
4.5 The Challenges Faced in the Implementation of SCM Practices .....	39
<b>CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>40</b>
5.1 Introduction.....	40
5.2 Summary of the Findings.....	40
5.3 Conclusions.....	42
5.4 Recommendations from the Study.....	43
5.5 Study Limitations.....	43
5.6 Recommendations for Further Research.....	44
<b>REFERENCES.....</b>	<b>45</b>
<b>APPENDIX I: RESEARCH QUESTIONNAIRE.....</b>	<b>48</b>
<b>APPENDIX II: HUMANITARIAN ORGANISATIONS IN KENYA.....</b>	<b>55</b>

## LIST OF TABLES

Table 2.1: Summary of Literature Review and Research Gaps .....	22
Table 4.1: Reliability Analysis .....	29
Table 4.2: Extent to which the organization had implemented Supply Chain Management practices .....	33
Table 4.3: Coefficients .....	36
Table 4.4: Model Summary .....	37
Table 4.5: Summary of One-Way ANOVA results .....	38
Table 4.6: Challenges Faced in the Implementation of SCM Practices .....	39

## LIST OF FIGURES

Figure 2.1: Conceptual Framework .....	24
Figure 4.1: Position in the Organization .....	30
Figure 4.2: Period of when the NGO was established .....	30
Figure 4.3: Category of NGO .....	31
Figure 4.4: Areas where the organization operates in.....	32

## **ABBREVIATIONS AND ACRONYMS**

CRM	Customer Relationship Management
CSCMP	Council of Supply Chain Management Professionals
CRED	Center for Research on the Epidemiology of Disasters
HO	Humanitarian Organization
HSC	Humanitarian Supply Chain
IOM	International Organization Migration
JIT	Just in time
NFI	Non Food Items
SCM	Supply Chain Management
UN	United Nations
WHO	World Health Organization

## ABSTRACT

This study was conducted to establish the relationship between supply chain management practices and service delivery in Humanitarian Organizations in Kenya. The study had three objectives; to establish the supply chain management practices in Humanitarian organizations in Kenya; to determine the impact of SCM practices on Service delivery; to determine the challenges faced in the implementation of SCM practices in Humanitarian Organizations in Kenya. The research design adopted a census study survey. The population of study comprised of 26 humanitarian organizations operating in Kenya. The study used primary data which was collected using self-administered questionnaires. The data was analyzed using descriptive statistics and regression models used to establish relationship between variables. The study established that most humanitarian organizations in Kenya have adopted Supply Chain Management practices in their Organization and this has led to integration of activities hence providing information allowing the organization to operate more effectively. This has led to the increase in the number of lives saved in the past few years , enabled the organizations to respond to different magnitude of disasters , reduce the time taken for a relief chain to respond to a disaster and utilize resources which indicates the level of efficiency in the supply chain. Supply Chain Management practices are affected by few skilled SCM experts, few investments and lack of planning and performance measurement. There is a significant relationship between Supply chain management practices and service delivery represented by  $R^2$  value of 0.753 which translates to 75.3% of the variations in service delivery which are explained by the independent variables understudy. It is recommended that the humanitarian Organizations in Kenya need to put in place measures that will enable the evaluation of supply chain management practices. The study was limited to humanitarian organizations operating in Kenya. Further research can be done to account for the 24.7% changes in Y which needs to be explained by other factors not found by regression model used in this research

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background**

Humanitarian supply chain has become attractive to academicians and practitioners because of the natural or man-made disasters that face human beings in their daily lives. (Kovacs&Spens,2007).Supply chain plays a very important role in providing relief to these victims (Wassenhove,2006).Humanitarians have become under pressure to prove to donors, pledging in millions in aid and goods that they are reaching those in need. Since donors are more aware when it comes to expenses, they have to monitor the effects of aid and this has made supply chain management to become important to humanitarian organizations (Wassenhove, 2006).

According to Byman (2000), humanitarian organizations have to contend with many stakeholders including desperate donors, media, military and beneficiary, hence donor accountability and transparency of the whole supply chain is very important. The final consumer does not enter into commercial transaction and has little control over the supplies; customer service may need to target the donor who must be shown how the humanitarian action is taking place (Munslow &Brown, 1999; Bookstein 2003).The frequency of natural or man-made disasters has increased over the years, for example terrorism attacks have become a major threat in Kenya, service delivery in humanitarian organizations have to be improved so that victims in the affected areas can be assisted efficiently and effectively.

Effective Supply chain management in humanitarian organizations, is a strategic and a cost saving tool in the delivery of relief through improved operational efficiency ,in the planning, delivery and distribution of relief goods (Wassenhove,2006).Consequently, Only those humanitarian organizations that can leverage emergency relief chain management as a differentiator and a competitive tool are likely to possess a sustainable competitive advantage in the competition for donor funds, thereby guaranteeing their business continuity and survival.

### **1.1.1 Supply Chain Management Practices**

Supply chain management is an integrated approach beginning with planning and control of materials, services, logistics and information stream from suppliers to manufacturers or service providers to the end client (Fantanzy,2010).It is also the integration of all activities associated with flow and transformation of raw materials from the raw materials stage through the end user as well as the associated information flows (Handfields&Nicoles,2010).It is very important in an organization because it enables it to focus on reducing costs and improving customer service (Mentzer, 2001).

On the other hand, supply chain management practices are defined as a set of activities undertaken by an organization to promote effective management of its supply chain (Li 2005, Koh 2007). Six constructs have been formed from 24 supply chain management practices which are; supply chain integration, information sharing, supply chain characteristics, customer service management and JIT capability (Tan, 2002).

Strengthening the management of supply chain of any organization is seen to enhance customer satisfaction and to improve the performance of the organization.

When providing relief to disaster victims, Humanitarian organizations supply chain plays an important role which involves, planning and management of all activities involved with sourcing ,procurement and all logistic management activities, it also includes coordination and collaboration with actors who can be suppliers, intermediaries, donors, beneficiaries , third party service providers , developmental programs and operational activities in times of disaster and all the actors who are concerned with information, materials and financial flows of these programs (CSCMP, 2011).

### **1.1.2 Service Delivery**

Service refer to a type of economic activity that is intangible, not stored and does not result in ownership. It includes the exchange of information, asset of any type, knowledge and entails the development and management of supplier relationships (Romano & Giannakins, 2000) .It can be improved in any organization through the integration of service supply chains which may lead to improved service delivery and productivity. Productivity in services is a function of process efficiency and service quality (Grönroos & Ojasalo, 2004).

Service delivery assist staff in tailoring services to meet the specific business needs of an organization, it also involves the interaction between providers and clients, where the provider offers a service and the client either loses value or finds value in it. The service

providers in this case act as mediators in the provision of these services by taking a customer perspective of the supply network. The design and implementation of service delivery processes, plays a key role in the overall competitiveness of modern organizations, for example (Roth & Jackson, 2005), provide clear evidence that process capability and execution are major drivers of performance due to their impact on customer satisfaction and service quality.

In humanitarian organization it is measured by first determining the response time which is an important aspect of service delivery. Many factors contribute to response time including procurement and delivery strategies, supplier location, transport choice, safety and politics (Beamon, 1999). Secondly, flexibility measures organizations' ability to respond to different magnitude and time taken for a relief chain to respond to disasters (Slack, 1999). Thirdly, the number of lives saved, the qualifications and number of supply staff (Bisau, 2010) and lastly, resource utilization which indicate the level of efficiency in the supply chain and enables the organization to estimate accurately the funding requirements for various missions (Beamon, 1999).

### **1.1.3 Humanitarian Organizations in Kenya**

Kenya is exposed to a variety of natural and man-made disasters which include; disease outbreaks, food insecurity, floods, terrorism, drought, conflict, wars and road accidents. In recent years natural disasters such as flooding and drought have increased in frequency, intensity and duration as a result of climate change and environmental degradation. The shelter/NFI cluster estimates that 160000 persons could be displaced

between 2014 to 2016 due to natural and man-made disasters (IOM Humanitarian compendium, 2004).

Humanitarian organizations help to ensure that there is swift and efficient humanitarian assistance available when sudden natural disasters strike or outbreak of war. They include; multinational agencies such as United nations, Action against Hunger, International Federation of Red cross and Red Crescent Societies, which are supported by voluntary contributions by the national and international Governments and Non-Governmental Organizations in form of cash and any other kind of assistance with the aim of helping the people in need. There are two principles guiding humanitarian operations from (THE SPHERE 2011) Standards, Those affected by disaster or conflict have a right for assistance and second all the necessary steps should be taken to prevent or reduce human suffering.

Supply chain plays an important role in providing relief to disaster victims and it involves the planning and management of all activities involved with sourcing, logistics and procurement, it also includes coordination and collaboration with actors such as suppliers, intermediaries ,donors ,beneficiaries and third party service providers (CSCMP, 2011). The actors in humanitarian supply chain have to interact efficiently and effectively while offering their services so that the beneficiary and donor find value in the result.

## **1.2 Statement of the Problem**

Humanitarian supply chains have become complex over the last decade because different actors, processes, decisions and information have to be mixed to serve the needs of the victims affected by a disaster (Tufinkgi, 2006). Their systems are also composed by a series of stages in which materials and information flow through different steps to fulfill the needs of the recipient (Davidson, 2006). Attempting to manage complexity of supply chains in an unsystematic, piecemeal and non-strategic manner can result in sub optimal outcomes, waste of resources and loss of lives thus the effective planning of emergency, the management of supply chains in times of crisis is needed in reducing complexities in the supply chain in order to address and implement better responses (Tomasini & Wassenhove, 2009). The requirement to improve delivery in humanitarian aid has recently received increased attention due to the perceived failure in aid delivery systems following major crises (Fritz Institute, 2005).

According to OCED 2014 report, Kenya was classified as a fragile state in 2013 because of the increase in the number of natural and manmade disasters over the years, an average of 1,944,784 people a year have been affected by natural disasters over the last 10 years, drought having the largest impact (CRED, 2014). Between 2003 and 2012, Kenya received US \$14.6 billion in official development assistance making it the 15<sup>th</sup> largest recipient, hence the need of HOS in Kenya to Improve their operations so that they can be able to save more lives and prevent human suffering.

A number of studies have been conducted on humanitarian Supply Chain management. Stephen & Antony (2009) in their study found that collaboration is seen as a key differentiator in supply chain and in achieving integration and collaboration in supply networks, the importance of having close supplier relationships is widely acknowledged and collaborative binding can help to lower purchase costs. However the study was based on individual structural elements of the supply chain.

Richard & Gray (2009) studied customer service in emergency relief chains. They concluded that an understanding of various perspectives of the customer provides a starting point in the development of emergency relief chains. The study only focused on the customer in providing an understanding of designing and implementing effective supply chain.

Benita (2008) concluded that performance measurement for relief chain is very important in terms of securing donor funds (accountability) and improving the relief mission (saving lives and reduce human suffering), however the study was based only on performance of humanitarian organizations. In addition Muchiri (2012) found that security, cultural, political and coordination factors have influenced the effectiveness of humanitarian aid in Somalia, however the study was based on only those four factors and was limited to Somalia.

In addition Lisanza (2014) concluded that most humanitarian organizations in East Africa have been embracing SCM integration which has assisted them to enhance their

performance; however the study may not be applicable to other organization operating outside East African region. Lastly Ndambuki (2013) concluded that the integration of supply chain has proven to be of critical success for a company's supply chain and performance; however the study was limited to international humanitarian organization operating in Kenya.

Previous studies in this field have focused on the relationship between SCM and performance little has been done on SCM practices and service delivery in humanitarian organizations. This research sought to bridge the gap by answering the following questions, what are the SCM practices in Humanitarian Organizations in Kenya? What is the impact of SCM practices on service delivery in humanitarian organizations in Kenya? And what are the challenges facing humanitarian Organizations in the implementation of SCM practices in Kenya?

### **1.3 Research Objectives**

The research had the following main objectives:

- i. To establish Supply Chain Management practices in Humanitarian Organizations in Kenya
- ii. To determine the impact of SCM practices on service delivery in humanitarian Organizations in Kenya
- iii. To determine the challenges faced in the implementation of SCM practices in humanitarian Organizations in Kenya.

#### **1.4 Value of the Study**

The findings of the research will be useful to donors, policy makers and humanitarian organizations as it will help them understand the relationship between service delivery and supply chain in Humanitarian Organizations.

The results of this study will enable managers and other decision makers to make decisions that will improve service delivery in Humanitarian Organizations, lastly the research will help academicians and scholars to do more research on supply chain management practices and service delivery in Humanitarian Organizations. Supply chain managers may use it to design a more responsive supply chain.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter explores existing relevant literature on supply chain management practices and how they have an impact on service delivery in humanitarian organizations. It includes a review of the various studies that have been conducted by other researchers on Supply chain management practices and service delivery. Among the areas reviewed include SCM practices in humanitarian organizations, service delivery in supply chain and challenges faced in the implementation of supply chain management practices. This chapter also provides the research gaps identified and a conceptual framework.

### **2.2 Theoretical Framework of SCM Practices**

SCM practices are important to an organization because they increase an organization market share, return on investment and improve overall competitive position (Tata, 2000) through price, cost, quality, delivery dependability, time to market and product innovation (Wisner 2001). Three theories have been used to explain the concept of supply chain management practices: Systems theory, contingency theory and resource based view theory.

#### **2.2.1 Systems Theory**

Systems theory argues that a phenomenon is seen as a whole and not simply the sum of its elementary parts (Martinelli, 2001). A system comprises of subsystems whose interrelationship and interdependence move towards equilibrium of a larger system (Steele, 2003), the focus is on the relationship between parts in order to understand

an entity's organization, functioning and outcomes. It also views the organization as constantly interacting with its environment which is comprised of a set of relationships between agents, shareholders and other factors beyond the organizations control (Mason, 2007).

In SCM context systems theory brings together various components of complex supply chain (that is human, capital, information, materials and financial resources) to form a subsystem which is then a larger system of supply chain networks (Fowler, 2000). It can further help to identify interdependencies between constitutes of the system and a better understanding of the dynamics of the supply chain hence improve planning, execution, and coordination of humanitarian supply chain.

### **2.2.2 Contingency Theory**

Contingency theory argues that under different circumstances ,different solutions may prove effective (Antal,2010) ,instead of propagating universally applicable organization management principles, the theory tries to demonstrate that different circumstances require different organization structures(Baranyi,2001).Organization are affected by a number of contingencies including size, environment and technology .These contingencies are responsible for developing the specific structures and activities of an organization. When there is a mismatch between the contingent variables and the structure, the organization will achieve lower performance (McGovern &Earl, 2001).

Robin & Barwell (2007) stated that in order to improve supply chain performance for functional and innovative products, a firm must change its organizational characteristics and organize its supply chain drivers to form an efficient and responsive supply chain (Lee 2001). Stonebreaker & Liao (2004) outlined that effective supply chain integration will likely be tied to a range of environmental, strategic, human and operations variable. For efficiency and effectiveness a fit must exist between specific supply chain integration and the strategic and environmental conditions (Christopher, 2011).

### **2.2.3 Resource Based View Theory**

RBV explains that identification and possession of internal strategic resources contributes to a firm's ability to create and maintain a competitive advantage and improve performance (Crooke, 2008). A resource is considered strategic if it meets certain criteria—valuable, non-substitutable, rare or specific and imitable in order to contribute to improved performance of the firm (Barney, 1991). Resources must be effectively managed and exploited given the changing external circumstances that an organization faces in the competitive business environment (Lippman & Rumelt, 2003).

In today's ultra-competitive global business a well-managed supply chain is essential to create competitive advantage and value to the firm. (Lambert & Cooper, 2000). Competition is no longer defined as firm against firm but rather supply chain against supply chain (Min & Mentzer, 2004). When a firm creates linkages with suppliers and customers it facilitates the management of the flow and quality of materials into and

out of the firm thus the benefits should accrue directly to operational performance (Deere, 2006).

### **2.3 SCM Practices in Humanitarian Organizations**

A few supply chain management practices apply to humanitarian organizations and should be properly adapted to the specific context. As a consequence of modernizing their Supply chain by adopting supply chain practices, the International Federation of Red Cross and Red Crescent Societies (IFRC) received the European Excellence Award (Gatignon, 2010). According to Kushwaha (2010) SCM practices are categorized into; customer relationship management, Strategic supplier relationship, information sharing, demand management, postponement, capacity management and Information technology.

Strategic supplier relationship refers to the long term relationship between the organization and its suppliers within the organization hierarchy, internal coordination of SCM with other functions of the firm, active information sharing with suppliers and comprehensive supplier development activities (Kocabasoglu & Suresh, 2006). Long term relationship between suppliers and humanitarian organization enables them to make better use of their donors' capabilities to assist those affected by disasters. Coordinating operational activities through joint planning with suppliers result in removal of excessive inventory, reduction of lead times ,improvement of customer service, lower manufacturing costs, enhancement of demand uncertainty and increase in revenue (Arshinder, 2008). In times of disaster suppliers must come together, share resources and skills with the goal of supplying basic human items and needs such as water, shelter,

medicine, food to those in need and there is no financial motivation behind such coordination (Tomasini & Wassenhove, 2009).

Information sharing is the extent to which nonpublic information is communicated along the supply chain (Moberg, 2002). Supply chain partners who exchange information regularly are able to work as a single entity (Stein & Sweat, 2002). The humanitarian supply chain, through an effective information infrastructure and sensitive needs assessment mechanism at the field level, would enhance supply chain agility by being very responsive to the changing needs of end users. The agile supply chain is capable of reading and responding to real demand as it is demand driven and activated with a “feed forward mechanism” (Chandra & Kumar, 2001) hence waste and costs from inaccurate forecasting and forecasting errors are reduced. The humanitarian supply chain thus becomes more information based and management of information during a crisis is claimed to be the single greatest determinant of supply chain success for humanitarian operations (Laan, 2009).

The implementation of IT allows companies to increase communication and coordination of various value adding activities with their partners and between functions within their own operations (Levi, 2000). In addition advancement of the internet technology offer significant opportunities for cost reduction, increased flexibility, increasing response and improving customer services (Lancioni, 2000) Information management is crucial in disaster management and the speed with which it is used can have critical impact on the effectiveness of the response (Perry, 2007). It assists in integrating activities and

providing information to allow humanitarian supply chain to operate more effectively. (Kovacs & Spens, 2007). The use of information system to track and trace relief items has the potential to significantly improve the effectiveness of aid delivery and minimize waste.

Customer relationship management comprises of practices that are employed for the purpose of managing customer complains, building long term relationship with customers and improving customer satisfaction (Tan,2000). Humanitarian organizations use CRM to communicate with supporters and donors to convince them to invest in something that may never benefit them directly. Customer participation starts out as low as in the immediate aftermath of a disaster as beneficiaries are simply there to consume. Donors on the other hand display a very high level of customer participation as they provide the resources to create any source of service and determine how it is being created (Sampson, 2000). It enables humanitarian organizations to build long term relationships with customers who are the donors and improve customer satisfaction to those who are affected by a disaster.

Demand management is concerned with balancing customer requirements with the capabilities of the supply chain (Bhutan, 2013). A disaster places exceptional demands on the supply chain, logistical and organizational skills of the affected country (WHO, 2001). Instantly after a disaster strikes, relief organizations conduct an initial assessment, the expected quantity of supply required to meet the relief needs of the population is estimated (Thomas, 2003), relief items to be procured are determined, this assessment is

translated into supply requirements. Demand for relief supplies varies in terms of magnitude, criticality and type of required materials hence it is highly predictable (Kovacs & Spens, 2007). This enables the organization to know the goods and services required by the affected victims and deliver them.

Capacity management refers to determining the available resource per period (Zapfel, 2000). Its primary goal is to ensure that IT capacity meets current and future business requirements in a cost-effective manner. The complicated and interconnected nature of modern supply chain means that failure at any point on the chain can have ripple effects. By making sure that suppliers have the capacity to accommodate upswings in demand, both unexpected and expected, companies can minimize the risk of their supply chain and avoid costly and long-lasting disruptions (Potter, 2010). Four key areas affecting capacity are warehousing, transport, human resources and material handling devices (Gunasekaran & Ngai, 2003). Increasing the capacity networks can be done by collaborating with commercial agencies, for example World Food programs in partnership with TNT use their off-peak capacity (Cottril, 2004). Additionally, it may extend to include the ability of ports and airports to handle relief commodities under different scenarios.

Postponement is the practice of moving forward one or more operations or activities (making, sourcing and delivering) to a much later point in the supply chain (Dabholkar, 2000). The inability of humanitarian organizations to make particular relief items available is critical to many suffering people (Hoek 2001; Christopher & Towill, 2000).

Postponement is intended to reduce the “anticipatory risk” of logistics, postponing commitment of inventory (both in form and in time) until customer orders are received (Bowersox & Closs, 1996). Applying effective demand led inventory management through the principle of postponement may prove a cost effective substitute for pre positioning, enabling assignment of relief supplies to be rapid. These supplies, held as generic “strategic inventory”, are then distributed according to the evolving needs of the end users, using standard designs that can be customized right before delivery.

These are some of the practices that can be applied to humanitarian organizations; some occur within the organization for example demand management, postponement, capacity management and IT, while others occur between organizations, examples include customer relationship management, information sharing and strategic supplier relationship.

#### **2.4 SCM Practices and Service Delivery in Humanitarian Organizations**

SCM practices have a considerable impact on service delivery, A number of studies have focused on the relationship between SCM practices and service delivery and provided both negative, positive and mixed findings, Bisau (2010) examined the effectiveness of UNCHR supply chain management strategies in delivering humanitarian emergency goods and services, in the 2006 Israel Lebanon war crises, The researcher adopted a case study approach and purposive sampling method. He found out that supply chain management strategies adopted in Lebanon by UNHCR did not work, this was due to poor supply structuring and staffing approach, secondly, there was a worrying trend

where majority of respondents represented by 79% revealed that the average deliveries from international suppliers or stockpiles arrived between 30 to 45 days. However the study focused on humanitarian operations in response to Lebanon crisis 2006, in addition the study interviewed staff in Lebanon only and did not involve supply staff in other neighboring operations and finally the supply chain management strategies of UNHCR were donor driven.

Paderborne (2009) found out that supply chain is very important in the efficiency and effectiveness of humanitarian operations, secondly there is a high degree of complexity involved in the management of logistics and supply chain in humanitarian operations, thirdly HO neglect logistics and supply chain process models in controlling and managing their supply chain .Lastly HO do not adequately measure the performance of their supply chain. However the study was limited to humanitarian operations alone and used reference model which bears the risk of impeding the competitive advantage of an organization.

Olontruba & Gray (2009) examined customer service in emergence supply chain. They used a literature based approach and found out that understanding the various prospects of the customer provides a starting point in the development of emergency relief chain and this results to satisfaction to all concerned, however the study did not demonstrate any specifics or institutional pressures that will affect the implementation of an emergence relief chain in a country and it focused only on the customer.

Mungatia (2010) studied effectiveness of supply chain management strategy in disaster management in world vision Kenya. Case study approach and content analysis were used to analyze data. He established that, WVK supply chain management strategy has led to its ability to manage and respond to disasters effectively, in addition it has a fully-fledged supply function which other organizations have adopted, lastly the adoption of SCM best practices has led to shorter delivery lead times, more efficient inventory management, information sharing and team work. Fostering a spirit of shared ownership of the problems and celebrations, however the study was carried out when WVK had to realize various operational agendas and the concept of supply chain was not well understood.

Maguti (2010) examined supply chain management practices applied in disaster response, Descriptive survey design was used for this study, he found out that the success of organizations was more likely to be improved if they invested more on these practices, however the study used a sample size of 27 which was small and hence the result projections of the study could have been compromised. Secondly the study chose humanitarian organizations that offer response to vulnerable communities during disaster. In addition Mohammed (2012 ) examined supply chain management practices and their impact on performance, the researcher adopted a descriptive research design and used a sample size of 28, the study found out that maintaining good supplier relationship, flexible production processes, use of technology, inter organization integration, simplicity in internal operations, effective and efficient internal operations and continuous improvement are among practices applied by humanitarian organizations in Kenya.

However the study was limited to the effects of SCM practices on performance in humanitarian organizations.

## **2.5 Challenges Faced in the Implementation of SCM Practices in Humanitarian Organizations**

Humanitarian organizations have operational and cultural characteristics which make them to struggle with their operational efficiency including SCM (Rickarg, 2003). Three interrelated issues relate to the effort to develop humanitarian supply chain operations into efficient and effective methods; learning, strategizing, coordinating and measuring. These three dimensions connect directly to the specific nature, characteristics of HOS and their operations (Beamon, 2004).

According to learning issues, members of disaster relief agencies often appear to be resourceful, talented and hardworking (Bonney, 2003) however the many volunteers come from different professional backgrounds which does not provide a basis for development of efficient and effective SCM because few skilled SCM and logistics experts appear on the scene (Gustavsson, 2003). In addition the lessons learnt from one disaster event fade before the next one and experience does not move easily among disaster events and responders (Samii & Wassenhove, 2003). Most organizations further underestimate the potential role of SCM in disaster relief organizations and focus on direct relief operations rather than constrain management (Arminas, 2005), hence the challenge becomes to establish and reaffirm the case for more efficient SCM practices in Humanitarian operations.

Secondly in strategizing issues, funding often hinders humanitarian organizations from adopting a strategic posture, donations which provide the main funding for relief efforts often increase immediately after a disaster occurs (Ratliff, 2007). Furthermore action focused cultures, tactic knowledge, funding issues and lack of coordination for SCM practices often hinder the development of information systems, information technology and logistics systems. Even though more sophisticated SCM tools could result in lower costs and more efficient operations ,Organizations have limited financial and human resources to invest in such advances (Thomas, 2003).Hence few investments in technology or improving SCM practices limits HOs ability to make strategic choices about sourcing, purchasing and inventory prepositioning.

Lastly regular planning in humanitarian supply chains is frequently lacking, suggesting a limited degree of agreement about their processes and their synchronization. (Ratliff, 2007). Furthermore coordination problems make the interactions among many actors in the field including the many decentralized agencies and the large number of volunteers trying to help difficult, hence results in wasted energy and resources (Mcentire, 2000).

Finally the quality of the relief provided suffers when Hos lack a clear overview of their performance because this sector rarely measures SCM performance. Reporting becomes more difficult as a result of lack of information and communication technology as well as limited training of field workers (Thomas,2005), hence developing key performance indicators vastly improve SCM practices and disaster relief operations.

These three interrelated dimensions thus hinder effective and efficient SCM practices in disaster relief; the specific elements and challenges associated with each illustrate that improving existing practices demands a systematic perspective. An attempt to meet these challenges individually will have little effect, whereas a concerted evolution of SCM related practices in disaster relief may provide significant benefits.

## 2.6. Summary of Literature Review and Research Gaps

**Table 2.1: Summary of Literature Review and Research Gaps**

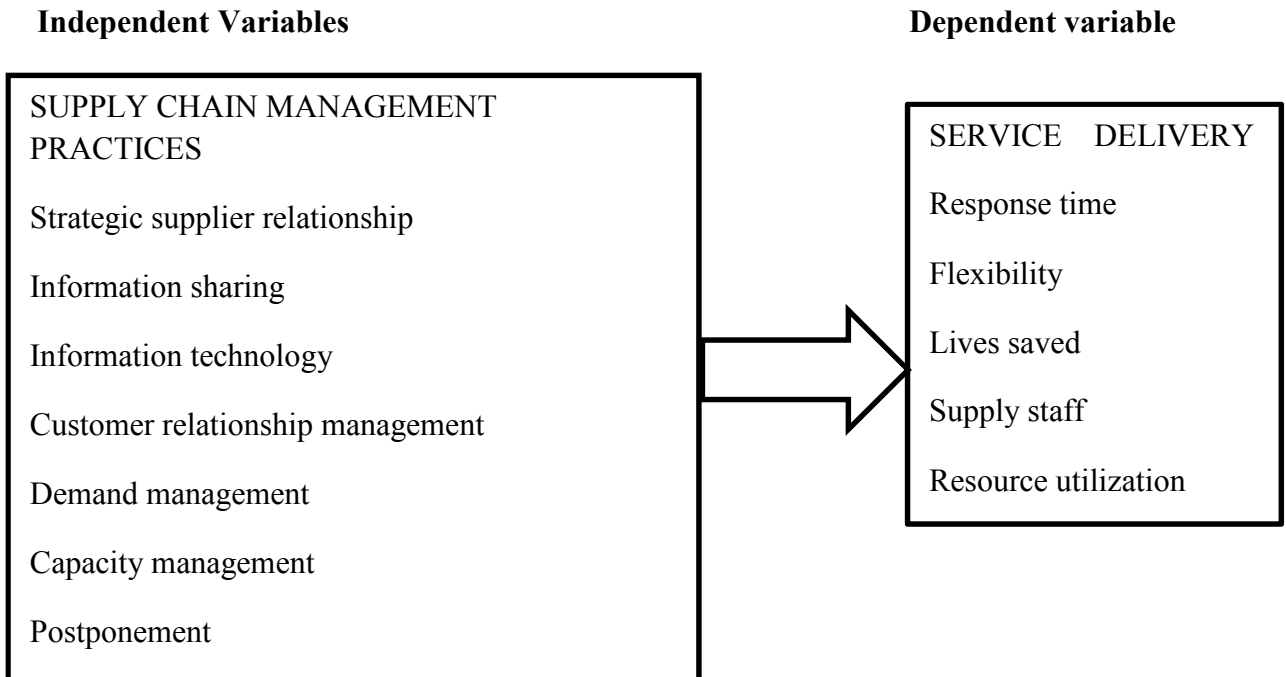
<b>Scholar</b>	<b>Focus of study</b>	<b>Methodology</b>	<b>Major findings</b>	<b>Major contribution</b>	<b>Knowledge gaps</b>
Bisau (2010)	Effectiveness of UNCHR supply chain management strategies	case study approach and purposive sampling	Supply chain management strategies did not work, due to poor supply structuring and staffing approach.	The study revealed a worrying delivery trend that was likely to jeopardise the cohesion between UNHCR, donors and beneficiaries	Limited to one humanitarian organization
Olontruba & Gray (2009)	Customer service in emergence relief chain	Literature based review	Understanding customers various prospects provides a starting point in the development of relief chain	Study emphasized on the different and varying requirements of the customers	Study concentrates only on customer service in emergence relief chain
Paderborne (2009)	Examined a reference model for supply chain management processes	Information system research was used	Supply Chain management is of crucial importance for effectiveness and efficiency of humanitarian operations There is high degree of	The reference model provided a tool for humanitarian organization to rapidly visualize the tasks carried out by humanitarian organization	It was limited to the reference model which limited organizations to perform superiorly than its competitors

			complexity in humanitarian supply chain		
Mungatia (2010)	Effectiveness of supply chain management strategy in disaster management	Case study approach and content analysis were used	SCM strategy has led to the management and response to disasters effectively	The study can be replicated by individual agencies that carry humanitarian work	This study was limited to supply chain strategy in disaster management
Munguti (2010)	Supply chain management practices in disaster operation	Descriptive study approach and a sample of 27 humanitarian organizations	SCM practices improved the success of humanitarian organizations	It stated the SCM Practices that can be applied to humanitarian organizations	The study focused on a wide scope of supply chain management practices
Mohammed (2012)	Supply chain management practices and performance in humanitarian organizations	Descriptive study approach and a sample of 28 humanitarian organizations	There is a positive link between Supply Chain management practices and performance	It established that the success of humanitarian supply chain was only through a properly endowed supply chain	It focused on the effects of supply chain management practices on performance alone

## 2.7 Conceptual Framework

The conceptual framework represents supply chain management practices in humanitarian organizations. The six independent variables were investigated to determine their relationship with service delivery in humanitarian organizations in Kenya.

**Figure 2.1: Conceptual Framework**



**Source: (Researcher 2015)**

Supply chain management practices improve service delivery in humanitarian organizations hence ensures efficiency and effectiveness in delivery in times of disasters.

Thus Organizations should adopt these practices for better aid delivery.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter outlines the research methodology that was used to carry out this research study. It discusses the research design, the target population, sampling design, data collection method and data analysis technique.

### **3.2 Research Design**

This study employed descriptive survey design; the design is the most appropriate since it ensures that the data obtained gave appropriate answers to the research questions. A descriptive research describes a situation or condition at hand, it examines aspects such as opinion ,abilities ,behavior ,knowledge and beliefs of individuals, groups or situation(Kothari ,2005).It can only describe a set of observations on the data collected but it cannot draw conclusions from the data about which way the relationship goes(Jackson, 2009).

### **3.3 Population and Sampling**

The population comprised of 27 humanitarian organizations operating in Kenya (see appendix II) as identified by the Relief web (2015). A census was conducted for this study since the population is small.

### 3.4 Data Collection

Data was collected from supply chain managers/officers from all the 27 humanitarian Organizations. They were considered appropriate since they understand better the SCM practices carried out by their organization.

Primary data was used in this research, the data was collected using questionnaire consisting of four parts, Part A -consisted of general information pertaining humanitarian organizations, Part B, C and D contained information on research objectives, It consisted of both closed and open ended questions and was in the form of Likert scale where respondents was required to indicate their views on a scale 1 to 5. Drop and pick later method of data collection was used and collected at an agreed time and place between the researcher and respondents.

### 3.5 Data Analysis

The data was reviewed for completeness and accuracy upon completion of the data collection process. Grouping and arranging of data with respect to questions was done. Descriptive statistics such as standard deviation mean and mode were applied in analyzing the questions using Statistical package for Social Sciences. Frequencies and percentages were used in analyzing objective one and regression analysis objective two.

The following regression model was used to establish the relationship between supply chain management practices and service delivery.

$S = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + e$  where S =service delivery; a=the s intercept i.e value of s when  $x=0$ ;  $b_1, b_2, b_3, b_4, b_5, b_6$  and  $b_7$  are the regression weights

coefficient of variables;  $X_1$ =Strategic Supplier Relationship,  $X_2$ =capacity management,  $X_3$ =Postponement,  $X_4$ =Customer Relationship Management,  $X_5$ =Information sharing,  $X_6$ =Demand management,  $X_7$ =Information Technology and  $e$ =error term. The information was displayed by use of bar charts, graphs, pie charts and tables to search for any correlation between variables.

## **CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

### **4.1 Introduction**

This chapter discusses the presentation and interpretation of the findings obtained from the field. The chapter presents the background information of the respondents, findings of the analysis based on the objectives of the study. Descriptive and inferential statistics have been used to discuss the findings of the study.

The study targeted a sample size of 27 respondents from which 26 filled and returned the questionnaires making a response rate of 96.3%. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. Based on the assertion, the response rate was excellent and satisfactory to make conclusions for the study as it acted as a representative.

### **4.2 Reliability Analysis**

A pilot study was carried out to determine reliability of the questionnaires. It involved the sample respondents. Reliability analysis was subsequently done using Cronbach's Alpha which measured the internal consistency by establishing if a certain item within a scale measures the same construct. Gliem and Gliem (2003) established the Alpha value threshold at 0.7, thus forming the study's benchmark. Cronbach Alpha was established for every objective which formed a scale. The table shows that Postponement had the highest reliability ( $\alpha = 0.885$ ), followed by Strategic supplier relationship ( $\alpha = 0.875$ ),

Information technology ( $\alpha=0.857$ ), Demand management ( $\alpha=0.847$ ), Customer relationship management ( $\alpha=0.794$ ). Information sharing ( $\alpha=0.792$ ) and Capacity management ( $\alpha= 0.789$ ). This illustrates that all the seven variables were reliable as their reliability values exceeded the prescribed threshold of 0.7.

**Table 4.1: Reliability Analysis**

Scale	Cronbach's Alpha	Number of Items
Strategic supplier relationship	.875	4
Information sharing	.792	3
Information technology	.857	4
Customer relationship management	.794	3
Demand management	.847	4
Capacity management	.789	3
Postponement	.885	4

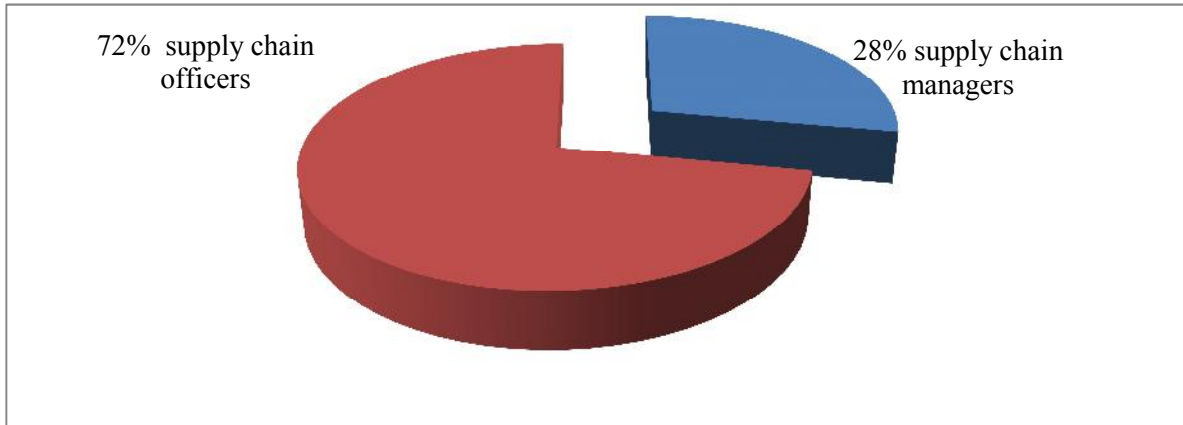
**Source: Research Data (2015)**

## 4.2 General Information

### 4.2.1 Position in the Organization

Respondents were requested to indicate their job Position in the organization. From the research findings, the study revealed that 72% of the respondents worked as Supply chain officers while the rest 28% of the respondents worked as Supply chain managers. This confirms that the respondents of this study were all SCM professionals who had the required knowledge needed for this research.

**Figure 4.1: Position in the Organization**

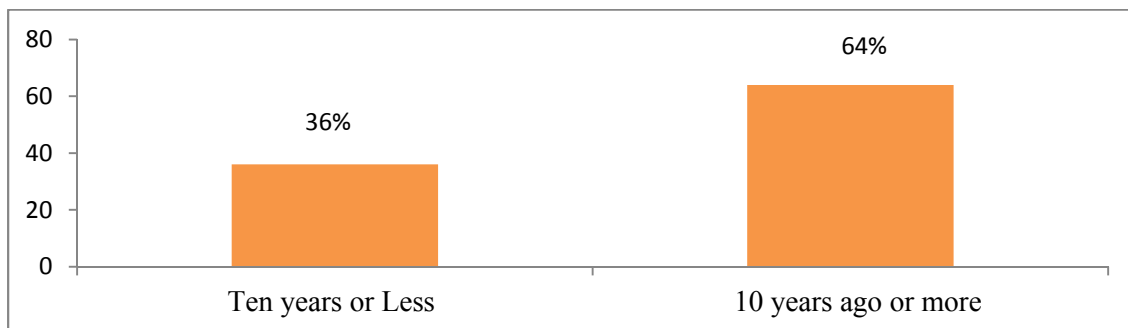


**Source: Research Data (2015)**

#### **4.2.2 Period of when the NGO was established**

The study sought to establish the period in which the Humanitarian organizations have been in operation. From the research findings; majority of the respondents showed that 64% of the organizations have been operating for a period of more than 10 years while 36% of the organizations have been operating for less than 10 years. This implies that most of the organizations have been operating for a considerable period of time which implies that they were in a position to give credible information relating to this research.

**Figure 4.2: Period of when the NGO was established**

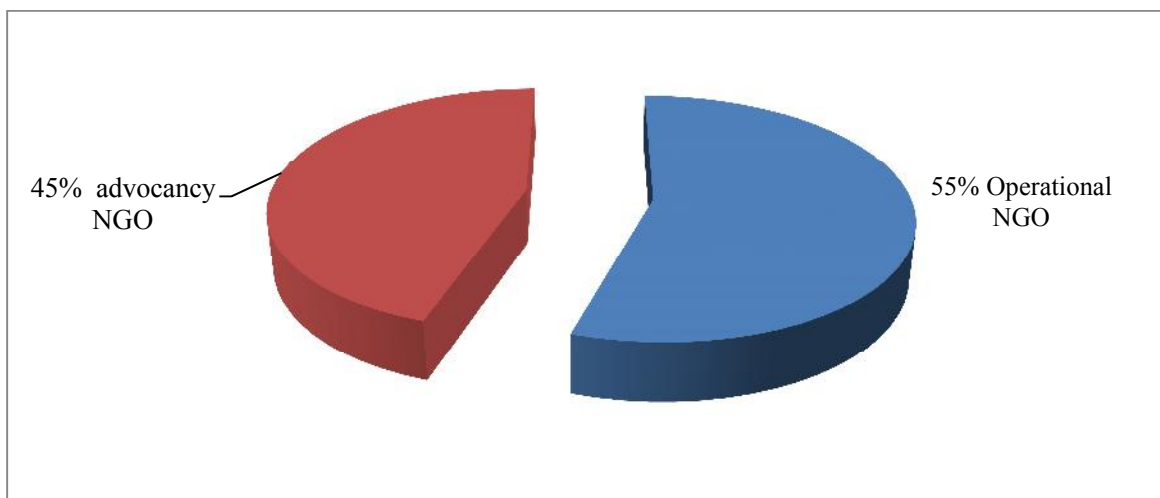


**Source: Research Data (2015)**

### 4.2.3 Category of NGO

The research sought to establish the category in which the organizations fall. Based on the study findings, 55% of the respondents indicated that the NGOs fall under operational category while 45% indicated that the organizations advocated for various issues in the society. This implies that both operational and advocacy Humanitarian organizations were engaged in this study.

**Figure 4.3: Category of NGO**



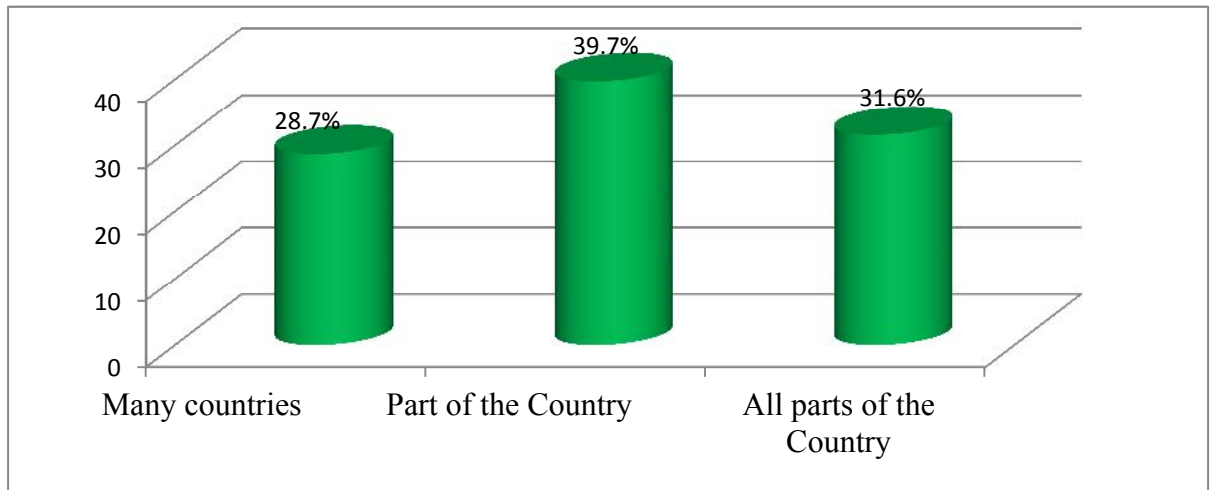
**Source: Research Data (2015)**

### 4.2.4 Areas Where the Organization Operates in

The research sought to establish the areas in which the organizations operate, from the research findings 39.7% of the respondents indicated that the organizations operated only in defined parts of the country, 31.6% indicated that the organizations operated in all parts of the country while 28.7% indicated that the organizations operated in many

countries. This implies that respondents were fairly drawn from different NGOs operating in various parts of the country.

**Figure 4.4: Areas where the organization operates in**



**Source: Research Data (2015)**

### **4.3. Supply Chain Management Practices**

The research sought to establish the extent to which the organizations had implemented Supply chain management practices and the results are presented in the table 4.3.

**Table 4.2: Extent to which the organization had implemented Supply Chain Management practices**

<b>Supply Chain Management Practices</b>	<b>Mean</b>	<b>S.D</b>
Customer Relationship Management	4.37	0.23
Demand Management	4.36	0.23
Capacity Management	4.36	0.22
Information Sharing	4.35	0.23
Information Technology	4.28	0.21
Strategic Supplier Relationship	4.18	0.23
Postponement	4.16	0.23

**Source: Research Data (2015)**

The results above indicate that the humanitarian organizations have adopted customer relationship management, this has been shown by a mean of 4.27. The organizations use CRM to communicate with donors and supporters and there is effective management of customers complaints hence long term relationships with customers and donors are built. This concurs with findings of Tan (2000) study which established that CRM are employed for the purpose of managing customer complain, building long term relationship with customers and improving customer satisfaction.

Demand management has also been implemented to a large extent and has a mean of 4.36, the organizations have ways to reduce demand variability and improve operational visibility, the organizations carry out an assessment after a disaster hence they are able to

control their production costs and prepare beyond their current period. This collaborates with Kovacs and Spens, (2007) study which found out that demand forecasting enables the organization to know the goods and services required by the affected victims and deliver them.

Majority of the respondents agreed that Capacity management has been implemented to a large extent and has a mean of 4.36, IT capacity meets current and future organizations requirement in an effective manner and suppliers have the capacity to accommodate upswings in demands hence this allows the organizations to budget for upcoming changes, the results are in support of Potter (2010) findings, which revealed that suppliers who have the capacity to accommodate upswings in demand( both unexpected and expected) can minimize the risk of their supply chain and avoid costly and long lasting disruptions.

Information sharing has a mean 4.35, there is sharing of information between supply chain actors regularly and organizations have effective information infrastructure and sensitive needs assessment which enhances supply chain agility. This collaborates with; Moberg (2006) study which revealed that shared information builds and strengthens relationships and social ties among information receivers and givers.

Information technology has a mean of 4.28, majority of the respondents agreed that the Speed in which IT uses affects the responsiveness of the response, IT assists in Integrating activities and providing information to allow organizations to operate more

Effectively and the organization uses information system to track and trace relief items

Strategic supplier relationship has a mean of 4.18, the organization make better use of their donor capability because of long term relationship between the organizations and their suppliers and there is coordinating operational joint planning between the organization and its suppliers. The findings concurs with the study by Kocabasoglu and Suresh,(2006),which established that Long term relationship between suppliers and humanitarian organizations enable them to make better use of their donors' capabilities to assist those affected by disasters.

Lastly postponement has a mean of 4.16 , majority of the respondents agreed to a large extent that the organization can make particular relief item available at any time, supplies are distributed according to the evolving needs of the end user and there is the application of demand led inventory management through the principle of postponement. The study concurs with the research by Bowersox & Closs, (1996), which revealed that applying effective demand led inventory management through the principle of postponement may prove a cost effective substitute for pre positioning, enabling assignment of relief supplies to be as rapid as appropriate hence the results indicate that humanitarian organizations have adopted supply chain management practices to a large extent in their organizations.

#### **4.4 Relationship between Supply Chain Management Practices and Service Delivery**

The study sought to establish the relationship between Supply chain Management practices and service delivery.

#### 4.4.1 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 21.0) to code, enter and compute the measurements of the multiple regressions.

##### 4.4.4.1 Coefficients

The study used the coefficient table to determine the study model. The findings are presented in the table below

**Table 4.3: Coefficients**

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.176	.317		0.555	0.592
Strategic Supplier Relationship (X <sub>1</sub> )	.597	.126	.397	4.738	.000
Information sharing (X <sub>2</sub> )	.546	.123	.524	4.439	.001
Information Technology (X <sub>3</sub> )	.554	.097	.544	5.711	.016
Customer Relationship Management (X <sub>4</sub> )	.569	.118	.551	4.822	.010
Demand management (X <sub>5</sub> )	.517	.122	.501	4.238	.014
Capacity management (X <sub>6</sub> )	.582	.142	.463	4.099	.017
Postponement (X <sub>7</sub> )	.634	.131	.592	4.840	.002

As per the SPSS generated output as presented in table 4.4, the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \epsilon$ ) becomes:

$$Y = -0.176 + 0.597X_1 + 0.546X_2 + 0.554X_3 + 0.569X_4 + 0.517X_5 + 0.5582X_6 + 0.634X_7$$

At 5% level of significance, all the predictors are significant since all P values are less than 5%. ( $X_1=0\%$ ,  $X_2=1\%$ ,  $X_3=1.6\%$ ,  $X_4=1\%$ ,  $X_5=1.4\%$ ,  $X_6=1.7\%$ ,  $X_7=2\%$ ). This is corroborated by the high t values (all are greater than 2). This implies that there is a positive relationship between Supply Chain Management practices and service delivery. This corroborates with the findings of Franks and Curswoth, (2003), which established that Supply chain Management practices are positively related to performance.

#### 4.4.4.2 Model Summary

This section describes the adequacies of the overall model.

**Table 4.4: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897 <sup>a</sup>	.805	.753	.29491

The study used coefficient of determination to evaluate the model fit. The model had an average adjusted coefficient of determination ( $R^2$ ) of 0.753; this implied that 75.3% of the variation in service delivery in humanitarian organizations is explained by the independent variables in the study (Strategic supplier relationship, information sharing, information technology, customer relationship management, demand management, capacity management and postponement). This indicates a very high explanatory power of

the model since it is greater than 70%. The remaining 24.7% of the changes in Y is explained by other factors not in this model.

#### 4.4.4.3 ANOVA

The study further tested the significance of the model by use of ANOVA technique. The findings are tabulated in table below.

**Table 4.5: Summary of One-Way ANOVA results**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>	
1	Regression	11.174	7	4.174	10.594	.000 <sup>b</sup>
	Residual	7.092	18	0.394		
	Total	18.266	25			

For 0% level of significance, the numerator df =7 and denominator df =18, critical F value 2.58. The calculated value was greater than the critical value ( $10.594 > 2.58$ ). This indicates that the overall model is statistically significant. This is supported by the P value which is zero (less than 5%). This collaborates with the findings by Paderborne (2009) which established that supply chain is very important in the efficiency and effectiveness of delivery in humanitarian operations.

#### 4.5 The Challenges Faced in the Implementation of SCM Practices

**Table 4.6: Challenges Faced in the Implementation of SCM Practices**

<b>Statement</b>	<b>Mean</b>	<b>SD</b>
Lack of coordinated supply chain hinder the development of information systems	4.42	0.23
There is Lack of clear overview of their performance	4.38	0.21
Regular planning in HOS is frequently lacking	4.23	0.22
Few skilled experts in SCM poise a barrier	4.19	0.18
Funding hinders the organization from adopting a strategic posture	4.15	0.24

**Source: Research Data (2015)**

The research sought to establish the extent to which respondents agreed with the above statements relating to challenges faced in the implementation of SCM practices. From research findings, majority of the respondents agreed that lack of coordinated supply chains hinder the development of information systems as shown by a mean of 4.42, there is lack of clear overview of their performance as shown by a mean of 4.38, regular planning in HOS is frequently lacking as shown by a mean of 4.23 and that few skilled experts in SCM poise a barrier as shown by a mean of 4.19. The results are consistent with (Rickarg 2003) findings, which indicated that humanitarian Organizations have operational and cultural characteristics which make them struggle with their operational efficiency including SCM, hence this creates challenges for humanitarian organizations while carrying out their functions.

## **CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. They sought to establish supply chain management practices in humanitarian organizations in Kenya, to determine the impact of SCM practices on service delivery in humanitarian organizations in Kenya and to determine the challenges faced in the implementation of SCM practices in humanitarian Organizations in Kenya.

### **5.2 Summary of the Findings**

It was established that most of the humanitarian organizations maintained good relationship, shared resources and skills and made better use of their donor capability because of long term relationship with their suppliers. The study also established that performance management consequently adds value to the organizations; hence organizations should support continuous performance improvement by holding suppliers accountable for poor performance and providing incentives for outstanding performance.

The research also revealed that most of the organizations were keen to ensure adequate flow of information and that information sharing serves as an essential approach for the survival of NGOs; In addition, most of the organizations have an effective information infrastructure and sensitive needs assessment which enhances supply chain agility.

Long term relationship with customers improves customer satisfaction; hence most of the humanitarian organizations use CRM to communicate to donors and supporters. The organizations balance customer requirements with the capabilities of the supply chain and have ways to reduce demand variability and improve operational visibility. IT capacity meets current and future organizations requirement in an effective manner, suppliers have the capacity to accommodate upswings in demand, and organizations determine the available resource per period, hence when the capacity level is carefully planned, the organizations can monitor costs during periods of growth and recession and be able to see projected capacity needs.

The research found out that mutual planning and problem solving efforts between the organization and supplier leads to improved customer satisfaction .Secondly the adoption of supply chain management practices has led to shorter delivery time and enabled organizations to be flexible in meeting customers' requirements, this has led to the increase in the number of lives saved in the past few years ,this has enabled organizations to respond to different magnitude of disasters and reduce the time taken to respond to disasters.

Lastly the study established that lack of coordinated supply chains hinder the development of information systems, SCM practices in most of the humanitarian organizations are faced with lack of clear overview of their performance, regular planning and few skilled experts in SCM poise a barrier.

### **5.3 Conclusions**

The study established that most of the humanitarian organizations made better use of their donor capability because of long term relationship; had effective information infrastructure and sensitive needs assessment which enhances supply chain agility. They have also instituted effective capacity management measures, demand management practices as well as postponement management practices. Therefore the study concludes that considerable number of Humanitarian Organizations have adopted SCM practices which include strategic supplier relationship, capacity management, postponement, customer relationship management, information sharing, demand management, and information technology

The study revealed that adoption of SCM practices by humanitarians Organizations in Kenya has led to integration of activities and information allowing the organization to operate more effectively, this has enabled organizations to respond to different magnitude of disasters. Supply chain management practices have led to resource utilization which indicates the level of efficiency in the supply chain and are also ready to respond to different magnitude of disasters thus SCM practices have a positive impact on service delivery in humanitarian Organizations in Kenya.

The research established that humanitarian Organizations in Kenya faced challenges in the implementation of SCM practices which include lack of coordinated supply chains which hinder the development of information systems, lack of clear overview of their performance, and that few skilled experts in SCM pose a barrier.

#### **5.4 Recommendations from the Study**

Supply chain management is important to humanitarian logistics managers because of the cost savings and operational efficiencies that can be realized through proper planning, collaboration, and holistic analysis of the relief effort. The web of activities influenced and facilitated by good logistics is intricate and far reaching. These activities can be unified towards faster, more efficient delivery of aid by employing the principles explained in this research. Based on the research findings the study recommends that the humanitarian Organizations in Kenya need to put in place measures that will enable evaluation to be adopted in supply chain management practices, this should be done by keeping all practices updated. Monitoring and evaluation for specific practices should be done occasionally to ensure that all is done according to how it should be done. The organizations should continually invest in information technology systems which on average help to manage and control almost all other functions within the organizations.

#### **5.5 Study Limitations**

Due to finance and time constrains, the research was limited to only 27 Humanitarian Organization operating in Kenya. Therefore to generalize the results for a larger group the study should have involved more humanitarian organizations in other countries.

Some respondents were not willing to cooperate filling the questionnaire, this was overcome by talking to the respondents first, they also took a long time to fill and complete the questionnaire but the researcher ensured that the date of completing the questionnaire was done on time.

## **5.6 Recommendations for Further Research**

The study sought to establish supply chain management practices and service delivery in Humanitarian Organizations in Kenya. The study variables; strategic supplier relationship, information sharing, information technology, customer relationship management, demand management, capacity management and postponement, explained 75.3% variations in service delivery in humanitarian organizations. The research recommends that other variables accounting for 24.7% need to be identified and their influence assessed as well.

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## APPENDIX I: RESEARCH QUESTIONNAIRE

### Section A: General information

1. What is your position in this organization?

a. Supply chain manager [ ]

b. Supply chain officer [ ]

c. Other (please specify) [ ]

2. When was your NGO established?

Ten years or Less [ ]

10 years ago or more [ ]

3. To what category does your NGO fall?

Operational NGO [ ] or Advocacy NGO [ ]

4. Areas the organization operates in

Many countries [ ]

Part of the Country [ ]

All parts of the Country [ ]

### Section B: Supply chain management practices

To what extent has your organization implemented the following Supply chain Management practices in an effort to improve service delivery. **The scale below will be applicable;**

1= does not occur 2=small extent 3=medium extent 4=Large extent 5=very large extent

<b>Strategic supplier relationship</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.The humanitarian organization maintains good relationship with its suppliers					
2.The organization shares skills and resources with its suppliers					
3.The organization make better use of their donor capability because of long term relationship					
4.There is coordinating operational joint planning between the organization and its suppliers					

<b>Information sharing</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. The organization is keen at adequate flow of information in all its operations.					
2.There is sharing of information between Supply Chain actors regularly					
3. The organization has an effective information infrastructure and sensitive needs assessment which enhances Supply Chain agility.					

<b>Information technology</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.The organization uses information system to track and trace relief items					
2.IT assists in integrating activities and providing information to allow organization to operate more effectively					
3. The speed in which IT uses affects the responsiveness of the response.					
4.The organization has invested in specific support system and IT to assist it in controlling relief operations.					

<b>Customer Relationship Management</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.The organization uses CRM to communicate to donors and supporters to convince them to invest in something that may never benefit them					
2.long term relationship with customers improves customer satisfaction					
3.There is effective management of customer complains					

<b>Demand Management</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.The organization balances customer requirements with the capabilities of the supply chain					
2.The organization has ways to reduce demand variability and improve operational visibility					
3.The organization carries out an assessment after a disaster strikes to bridge the gap between Supply and Demand					
4.The organization knows the goods and services required by the affected victims and deliver them					

<b>Capacity management</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.Suppliers have the capacity to accommodate upswings in demand					
2.IT capacity meets current and future organization requirement in an effective manner					
3.The organization determines the available resource per period					

<b>Postponement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.The organization is flexible in developing different versions of the product to meet changing customer needs					
2. The organization can make particular relief items available at any time.					
3.Supplies are distributed according to the evolving needs of the end user					
4.There is the application of demand led inventory management through the principle of postponement					

Any other practices (please specify).....

.....

**Section C: Relationship between supply chain management practices and service**

**Delivery**

Please indicate the extent to which you concur with the following statements concerning the relationship that exists between supply chain management practices and service delivery

**Use scale of;**

1= does not occur 2=small extent 3=medium extent 4=Large extent 5=very large extent

No		1	2	3	4	5
1	SCM practices have led to the increase in the number of lives saved in the past few years.					
2	It has led to resource utilization which indicates the level of efficiency in the supply chain.					
3	Adoption of SCM practices has led to shorter delivery time					
4	It has reduced the time taken for a relief chain to respond to disasters					
5	It has enabled organization to respond to different magnitude of disasters					
6	Demand management enables the organization to be flexible in meeting customers' requirements					
7	Mutual planning and problem solving efforts between the organization and supplier leads to improved customer satisfaction					

Any other (please indicate below)

.....

**Section D: The challenges faced in the implementation of SCM practice**

Please state the extent in which you agree with the following statements concerning challenges faced in the implementation of SCM practices

**Use scale of:**

1= strongly disagree 2=disagree 3=undecided 4=agree 5=strongly agree

NO	Statement	1	2	3	4	5
1	Few skilled experts in SCM poise a barrier					
2	Lack of coordinated supply chain hinder the development of information systems					
3	Funding hinders the organization from adopting a strategic posture					
4	Regular planning in HOS is frequently lacking					
5	There is Lack of clear overview of their performance					

Please state any other challenges

.....

**Thank you for your time**

## **APPENDIX II: HUMANITARIAN ORGANISATIONS IN KENYA**

1. Action Against Hunger (AAH)
2. CARE
3. Caritals International
4. Catholic Relief Services (CRS-USCC)
5. Doctors without Borders
6. Emergency Nutrition Network (ENN)
7. Food for the Hungry International (FHI)
8. Hunger Plus, Inc.
9. Interaction
10. International Committee of the Red (ICRC)
11. International Federation of Red Cross and Red Crescent Societies(IFRC)
12. International Organization for Migration (IOM)
13. International Rescue Committee (IRC)
14. Lutheran World Federation
15. Mennonite Central Committee (MCC)
16. Mercy Corps (MC)
17. Overseas Development Institute (ODI)
18. Oxfam
19. Refugees International
20. Relief International
21. Save the Children
22. The Office of U.S Foreign Disaster Assistance (OFDA)

23. United Nations Children's Fund (UNICEF)
24. United Nations High Commissions for Refugees (UNHCR)
25. United Nations Office for the Coordination of Humanitarian Affairs (OCHA)
26. US Committee for Refugees (USCR)
27. World Vision International

Source: Relief web (2015)