# DETERMINANTS OF EFFECTIVE IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT PRACTICES IN INTERNATIONAL HUMANITARIAN ORGANIZATIONS IN KENYA

**By**

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## DECLARATION

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

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## ABSTRACT

New models of business grounded on new methods of designing logistics flows and supply chains have developed in the past few decades. Supply chain management practices, like the use of information technology and decision making structures, along with information sharing, collaboration and stakeholders' integration, have allowed many industries to improve their supply chain by decreasing inefficiencies, improving service, and cutting costs of operating. Nevertheless, despite the well-documented indication of significant competitive advantage and cost decrease resulting from supply chain management practices, there is little known regarding the determinants of effective supply chain management practices implementation in international humanitarian organizations in Kenya. Consequently, this study sought to establish the determinants of effective implementation of supply chain management practices in international organizations in Kenya. This study employed descriptive survey design. The target population of this study comprised of all the 189 employees in the management level of the 21 humanitarian organizations operating in Nairobi, Kenya as identified by the Relief web (2016). The researcher used a stratified random sampling method to select to sample of 127 respondents out of the 189 management staff. The primary data was collected from the top management, middle and low level management using a self-administered semi structured questionnaire. The quantitative data collected was analysed using descriptive statistics such as frequency, percentages, mean and standard deviation using Statistical Package for the Social Science (SPSS) version 21 and Microsoft excel. In addition, a multivariate regression model was applied to determine the relative importance of each of the five variables with respect to effective implementation of supply chain management practices in international organizations in Kenya. The findings were then presented using frequency tables and graphs. Based on the research findings the study observed that human capital efficiency determines effective implementation of supply chain management practices in international humanitarian organization in Kenya. The study also found out that proper inventory management determines effective implementation of supply chain management practices in international humanitarian organizations in Kenya. The research further noted that management support is key in achieving effective implementation of supply chain management practices in international humanitarian organizations in Kenya. The research finally concludes that information sharing plays a big role in determining effective implementation of supply chain management practices in international humanitarian organization in Kenya. The study recommends that in order to improve on the level of human capital efficiency on supply chain management, managers of humanitarian organisations should recruit and continuously train SCM staff on how to improve on the efficiency of procurement functions, recruit competent staff with Knowledge and Skills on SCM functions and continuously train employees' on professional ethical practices. In relation to inventory management the managers in humanitarian organisation should ensure that inventory is properly managed, qualified employees with proper skills should be hired to manage inventory. Finally the study recommends that information gathering and processing should be improved in the supply chain.



**Keywords:** Supply chain management, information sharing, stakeholders' integration

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## DEDICATION

I dedicate this thesis to my beloved mother whom despite not having an opportunity to go to school ensured that I and my siblings did not miss this great opportunity. And to the loving memory of my late father whose pride was to hear his children speak English even though he did not understand one word himself and for that I will always be indebted.

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## ABBREVIATIONS AND ACRONYMS

**EVP**- Ethical Values and Principles

**JIT –** Just in Time

**NGOs**- Non-Governmental Organizations

**IHOs-**International Humanitarian Organizations

**R & D**- Research and Development

**SC**- Supply Chain

**SCM**- Supply Chain Management

**TQM**- Total Quality Management

**SPSS**-Statistical Package for the Social Science

## OPERATIONAL DEFINITION OF TERMS

**Executive/ Management support**

The management team active involvement and willingness to assist the organization achieve its objectives (Callender, 2007).

**Human capital efficiency**

A collection of resources; all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and collectively by individuals in a population (Akintoye, McIntosh & Fitzgerald, 2010).

**Information Sharing/ Communication strategy**

Channels used in communication and sharing information within the organization (Burns, 2012).

**Inventory Management**

Activities employed in maintaining the optimum number or amount of each inventory item (Laundry, 2010).

**Supply Chain Management**

The duty of integrating organizational units along a supply chain and coordinating flows to satisfy customer needs with the aim of improving competitiveness of the supply chain as a whole (Adebayo, 2012).

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the Study

Supply chain management is becoming a topic high on the international research agenda in addition to in practice. New business models grounded on new ways of designing logistics flows and supply chains have developed in the past few decades. Companies like Dell and the Spanish apparel retailer Zara are renowned in the global business world for their innovative thinking in logistics and supply chain solutions for reaching their customers. Logistics and logistics innovation are, nevertheless, not only about industrial production and products. Lately, organizations and firms including non-governmental organizations (NGOs) have started working with practices and programs to increase efficiency (Bartlett, 2009).

Supply chain management activities, like the use of information technology and decision making structures, in addition to information sharing, collaboration and integration of stakeholders, have enabled many industries to improve their supply chain by reducing inefficiencies, improving service, and cutting operating costs. Nevertheless, despite the well-documented evidence of significant competitive advantage and cost reduction resulting from supply chain management practices little is known about determinants of effective implementation of these practices in international humanitarian organizations in Kenya (McKone-Sweet et al., 2005). Inside an organization the department responsible for contributing to the overall success of a supply chain is often known as material management.

Strengthening the management of supply chain of any organization is seen to enhance customer satisfaction and to improve the performance of the organization. When offering relief to disaster victims, Humanitarian organizations supply chain plays a significant role which includes, planning and management of all events involved with sourcing ,procurement and all logistic management activities, it also comprises collaboration and coordination with

actors who can be suppliers, donors, intermediaries, 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 (Lambert, 2010).

The increasing number of natural and man-made disasters all over the world alongside donor's growing demand for more transparency and accountability for their money urges humanitarian aid organizations to professionalize and optimize the way they manage their operations (Oloruntoba & Gray, 2011). About eighty percent of these humanitarian aid operations are related to supply chain management activities (Van Wassenhove, 2011), indicating the increasing interest of logistics researchers and practitioners towards cross-learning opportunities between commercial and humanitarian operations (Kovács & Spens, 2011).

In recent years, humanitarians have come under immense pressure from the donors, pledging millions in aid and goods, to prove that they are meeting their objectives in the most efficient and effective way. Since donors are becoming more involved when it comes to expenses, humanitarian organizations are under greater scrutiny to monitor the impact of aid, not just the input and output but the whole operation (Wassenhove, 2011). As a result, humanitarian organizations are forced to be more result oriented, accountable and transparent in their operations. In disaster relief, 80 percent of the operations are spent on logistics. Therefore, efficiency and effectiveness in logistics and in particular SCM is of dire importance in the operation of humanitarian organizations. Therefore, just as the science of logistics and SCM has become important for private sector logisticians, so too is it becoming more important for humanitarians (Wassenhove, 2011).

### 1.1.1 Supply Chain Management Practices (Global Perspective)

Supply chain (SC) by definition is a network of distributors, retailers, transporters, storages and suppliers that take part in the sale delivery and production of a particular product (Christopher, 2010). It is a network of companies that comprises your suppliers, their suppliers, customers of your company and their customers, if they exist (Lambert, 2010). Supply chain management has various meanings. Yet, for purposes of this research, supply chain management has been defined as the duty of integrating organizational units along a supply chain and coordinating flows to satisfy customer needs with the aim of improving competitiveness of the supply chain as a whole (Adebayo, 2012). The purpose of supply chain management is to improve the long-term performance of the individual companies and of the supply chain as a whole. It is an integrating function with the primary responsibility for linking major business functions and businesses within and across companies into a cohesive and high performing business model (Jonsson, 2008).

Competition in today's world has become tighter because of the fact of perfect competition and perfect market (Pujawan, 2010). Achieving efficiency inside organization is no longer enough. A whole supply chain needs to be efficient as the competition is no longer between firms, but also among supply chains. Supply chain itself is formed from upstream and downstream level of supply. Whereas in upstream level, a smaller enterprise is playing a big role to sustain the continuity of raw materials, machine parts, and also consumer products (Li *et al.*, 2004). Because of the present competitive business environment and global market place, consumers are more demanding to have higher service levels better and cheaper products, more product varieties and faster delivery than ever before (Chow *et al.*, 2008).

In accordance to Pires (2014), SCM practices are linked to initiatives for changing the management of business processes in the supply chain. Vaart and Donk (2008) argue that supply chain practices are deliberated tangible activities or technologies that play a significant role in focal firm collaboration with its suppliers and customers. There are

numerous studies on SCM practices. Tan et al. (2012) categorised six constructs of SCM practices and established their correlations with company performance. Nevertheless, evidence on the relationship between SCM adoption and performance is mixed. The impact of contextual factors (size, position, extension of the chain) in adopting SCM practices are emphasized by Li et al. (2014). Halley and Beaulieu, 2010 furthermore emphasize the corporation's position on the SC and the field of operation. The impact of the industry precise factors have been highlighted by Hoek and Chapman (2014) who studied four different types of industry (engineering, auto, fast moving consumer goods, process) in India. The inter-relation between SCM operational capabilities, practices and performance have been emphasized by Hsu et al (2009).

In identifying the factors that affect SCM practices, the literature emphasizes contextual factors like size of the firm, position in the supply chain, the industrial sector; field of operation; and operational capacities or competitive priorities (CP) chiefly related to production. Various studies (Li et al., 2014; Halley & Beaulieu, 2010) have drawn attention to the impact of contextual factors like size, position and field of operation on the adoption of SCM practices. Some study has already researched the relationship between the company size and SCM. The absence of comfortable fit between small and medium size enterprises (SME) and SCM practices has been stated by several studies (Wisner, 2005), lest they are adopted in conjunction with large consumers. Thakkar, Kanda and Deshmukh (2008) also confirmed differences between large and small and medium enterprises in terms of key SCM practices.

Regarding the position in the SC, Li et al (2014) uphold that the corporation's position in its key chain differentiates it in terms of performance observation. Relationship with customers and quality of information exchanged are affected depending upon the location of the company on the SC and its proximity to the consumer. Some studies have shown the

inventory management as a significant factor in the adoption of SCM practices. Wong, Arlbjorn, and Fohansen (2005) who conducted case studies with toy manufacturers in European countries, a sector marked by seasonality and unpredictability, established the significant of mixing SCM approaches and initiatives to meet customers' demands. Wisner (2005) studied four different Indian companies and ascertained that the industry's SC characteristics, like leadership in operations management practices, bargaining power of the chain and configuration of the chain (amount of small size suppliers and large size auto manufacturers) can affect the adoption of SCM practices.

Non-governmental organizations (NGOs) worldwide, like many other companies, are often times faced with the challenge of managing their supply chains with dwindling financial resources, a lack of expertise, and insufficient personnel. Most of these organizations are surprised to learn that use of best practices in procurement processes can actually help them operate more efficiently while reducing their operating costs by as much as 60%. An efficient but flexible humanitarian relief supply chains is the key subject in disaster relief (Kovác & Spens, 2007).

Humanitarian relief organizations generally view information and knowledge sharing infrastructure as overhead rather than as a fundamental activity (Guven & Ergen, 2011). To make matters worse, relief donors generally view overhead costs as detrimental to a proposed project and their SCM, so overhead costs are kept to a minimum. In addition, since most funding is project based, there are few if any program resources that can be used to address longer-term, organization-wide information infrastructure needs among NGOs. Although NGOs voice the desire and willingness to cooperate, the pressure of competition is enormous, presenting challenges to joint communication and information sharing. There is a general reluctance of organizations to share information, especially information that is considered

proprietary or of significant value to organizations typically competing for funding from the same sources (Özpolat, Ribbink, Hales & Windle, 2015).

### 1.1.2 Supply Chain Management Practices in Sub-Saharan Africa (SSA)

Organizations are tasked with the responsibility of articulating and applying plans that if approved will lead to attainment of a continuous competitive advantage (Christopher, 2010). In the era of turbulent environment prompted by globalization of competition and ecommerce, international organizations need to continually scan the environment with a view to finding and instigating supply chain activities that will allow an enterprise to attain supply chain optimization using its limited resources (Abdifatah, 2013). In supply chain management arena, some of the famous activities among small, medium and large enterprises are outsourcing, benchmarking, customer relationship management, inventory management, collaboration among customers and suppliers, information technology management, management of human resources and partnerships. These practices are corroborated by a study conducted by Valmohammadi (2013) who identified the most common SCM practices to be outsourcing, strategic planning, holding safety stock, strategic supplier relationships, supply chain performance, information sharing and coordination, supply chain benchmarking and sub-contracting. In his findings, the researcher concluded that even though all the above SCM practices are important, holding of safety stock was singled out most important and adoption of IT as the least important of the practices.

Adoption of supply chain management practices among international organizations could yield several benefits like improved customer service, diminished operating costs, reduced inventory and access to markets. Despite the perceived SCM benefits, there are a few challenges a business enterprise may encounter in the course of implementing the practices. Some of the challenges could be high cost of information technology and other infrastructure, lack of credit, rising costs of transportation, changing consumer needs and lack of training in

supply chain management (Kazi, 2012). Kazi (2012) decided that supply chain management issues are more comprehensively explored in the context of large enterprises but less attention is paid to international humanitarian organizations.

The restricted and short-term nature of donor funding in IHOs in Africa makes it very difficult for these organizations to invest more strategically in long-term planning and discourages them from adequately investing in strategic information sharing infrastructure needed in the successful implementation of SCM practices. Unfortunately, inadequately planned and implemented IS infrastructure negatively impacts critical activities like contingency planning and preparedness. This forces IHOs in Africa into a reactionary mode where information and communication needs cannot be adequately addressed on the fly (Tatham & Pettit, 2010).

At the onset of an emergency, information such as assessments, statistics and census reports is needed immediately and must be as accurate as possible, in order to gauge the necessary level of response. Despite this need, the typical reality in disaster response is that existing information is either outdated, hard to find, scattered among different sources or unreliable for political or other reasons making the SCM in the IHOs an uphill task (Omondi, Ombui & Mungatu, 2013). The difficulties of sending assessment teams to a site without accurate information are extreme, often resulting in wasted time and resources. The negative effects of unreliable data to SCM were demonstrated in the NGO response to the Darfur conflict. Soon after the conflict started, NGOs needed to get estimates on the number of people in the geographically dispersed and hard to reach areas of Darfur to plan for the response. Roads, airfields and other transportation networks were either non-existent or in very poor condition within the region, preventing NGOs ability to engage in much field-level pre-assessment work. NGOs were often forced to rely upon outdated census information from the government (Moeiny & Mokhlesi, 2011).

### 1.1.3 **Supply** Chain Management Practices in Kenya

Institutions in Kenya have for a long time been struggling with serious issues of poor supplier management where cases of malpractices have been reported since the relationship existing is not based on trust and commitment which has affected the level of service delivery offered and more so efficiency and effectiveness of the supply chain management (World Bank, 2013). Institutions information sharing is rigid because of the bureaucratic structures and overreliance on manual ways of communication which has affected supply chain management performance because of delay of information from one entity to the other (Omondi, Ombui & Mungatu, 2013). Long-term versus short-term SCM issues among NGOs in Kenya are complicated by the often temporary nature of NGO workers. Further, NGO workers experience up to 80% annual turnover. This makes it more difficult for these workers to invest time and energy into longer-term SCM initiatives (Kimani, 2013).

Because of changing levels of physical and human resources, SCM practices may change among business oriented enterprises and NGOs. As a result of their relatively large resource bases, the large enterprises are more likely to adopt world class best practices such as benchmarking, outsourcing, supply chain design, strategic relationships and partnerships. Large corporations have well recognized the benefits of SCM, but small and medium enterprises (SMEs) are lagging behind in appreciating how integrated supply chain drives outstanding changes in business activities and work with positive consequences in better quality services, cost saving and efficiency. Past studies have showed that a large portion of small and midsize companies, still depend on manual processes to manage their global trade operations, specifically their exports. On that note, the SMEs are likely to adopt SCM practices like customer-supplier partnerships, information sharing, training, information technology, internal systems and processes (Barua, 2010). The researcher also concludes that there are challenges affecting effective adoption of supply chain. Most of the respondents

agreed that effective adoption was hampered by suppliers' geographical distance; supply chain disruptions; resistance to supply chain management changes; lack of enough resources to implement supply chain initiatives sufficiently; customers' geographical distance. Other challenges comprise lack of supply chain management knowledge and enough information systems linkages in the supply chain.

NGOs have deep organizational roots and cultures, and they are strongly committed to their various, often unique missions. For this reason, the maintenance of organizational autonomy is often cited as a barrier to increased coordination and interoperability in their supply chains. Given NGOs' strong desire for autonomy, interoperability is best viewed not as sharing common systems, but as "creating conditions that enable separate organizations to share information toward a common end (Solomon & Brown, 2004).

Projects implemented by NGO's involve the use of donor funds to achieve specific objectives for the benefit of the public. In Kenya, NGOs are licensed and regulated by the NGO Coordination Board. These organizations supplement government efforts to improve the living standards through implementation of diverse donor funded projects. However, majority of such donor funded projects often run into hurdles in the course of implementation. Most of these hurdles relate to supply chain management policies and the need to adhere to donor guidelines which do not necessarily result in effective utilization of funds and efficiency in service delivery (Kirugu, 2011). The study is taken against the backdrop of the importance of Non-governmental organisations in adopting efficient supply chain management systems bearing in mind the volume of goods and services purchased is continuously rising.

**1.2 Problem Statement**

Implementation of supply chain management practices in some international organizations is still a key challenge regardless of the rising attention being paid by all modern enterprises to

supply chain management practices globally. Munguti (2013) speculated that most of the NGOs used numerous supply chain activities such as collaboration with customers and beneficiaries and inventory optimization in their disaster response operations. Nevertheless, according to Thakkar et al (2012), supply chain management issues are more expansively explored in the context of large enterprises but less attention is paid to international humanitarian organizations. Additionally, Mohamed (2012) maintained that there are various SCM practices prevalent among NGO's in Kenya although a bigger percentage of the Supply Chain Management practices have not been effectively implemented among the NGOs in Kenya.

There has been a rise in complaints by the public, professionals and other stakeholder's about the supply chain management performance within the Non-Governmental organizations in Kenya. The opinion of many is that supply chain management within the institutions weigh below the stakeholders' expectations (Campbell & Jones, 2011). In recent years, humanitarians have come under immense pressure from the donors, pledging millions in aid and goods, to prove that they are meeting their objectives in the most efficient and effective way. Eighty percent of humanitarian organization's operations is spent on logistics and Supply Chain Management (SCM). Supply chain challenges faced therefore worsen humanitarian operations creating a lot of uncertainty among humanitarian organizations (Kimani, 2013).

Ineffective SCM systems have led to numerous negative consequences particularly to the beneficiaries as documented by various studies conducted on humanitarian Supply Chain management. Orukoh (2009) in his study found poor collaboration consequence in the goods and services not reaching the targeted beneficiaries in the right quality, time and the specifications. Richard and Gray (2009) study on customer service in emergency relief chains

concluded that lack of understanding of numerous standpoints of the customer would lead in the beneficiaries getting goods and services which are not need based.

The complexity of Supply chains management practices has amplified in the last decade among NGOs as different processes, actors, decisions and information have to be mixed to serve the needs of the victims affected by a disaster (Sonja & Amrik, 2015). The necessity to enhance delivery in humanitarian aid has recently received increased attention due to the perceived failure in aid delivery systems following major crises resulting in loss of life and huge resource wastage (Abdifatah, 2013).

Even though there has been a great effort to enhance efficiency, NGOs systems are composed by a series of phases in which materials and information flow through different steps to fulfill the needs of the recipient (Ketchen, 2008). Trying to manage complexity of supply chains in an unsystematic, piecemeal and non-strategic way has resulted in sub optical outcomes, waste of resources and loss of lives hence the effective planning of emergency, the management of supply chains in times of crisis is required in minimizing complexities in the supply chain to address and implement better responses (Tomasini & Wassenhove, 2009).

In implementing SCM process in a relief situation, humanitarian organizations are guided by donor requirement, the organization’s procurement policies and national laws. However, these guidelines are rarely followed during disasters. This is because managers coordinating logistics, during relief efforts, are often overwhelmed to deliver goods and services needed at the shortest time possible. Failure to do so can result in the loss of life and resources. By doing this, organization in most cases, do not achieve their objectives of ensuring value for money, achieving efficiency and effectiveness, ensuring fair competition among suppliers, and ensuring accountability, transparency and ethics. This creates problems in the organization especially with donors who at time may disallow some expenses incurred or withdraw funding completely. Until recently, humanitarian SCM has not been given the

proper attention needed and logistic skills remain underdeveloped (Wanssenhove, 2011). In addition, the donor organizations do not understand the challenges faced and often penalize the relief organizations for not adhering to set guidelines.

In spite of the central role of SCM in humanitarian operation, previous studies in this field (Miyare, 2014; Barua, 2013; Benita, 2008; Mungatia, 2012; and Ndambuki, 2013) have engrossed on the relationship between SCM and performance of numerous industries and little has been done on the determinants in the application of SCM practices. There is consequently a research gap on the determinants of the implementation of SCM practices in international organizations in Kenya.

## 1.3 Objectives of the Study

The study sought to achieve the following objectives;

### 1.3.1 General Objective

The general objective of this study was to establish the determinants of effective implementation of supply chain management practices in international humanitarian organizations in Kenya.

### 1.3.2 Specific Objective

The specific objectives of this study were;

i) To determine the influence of human capital efficiency on effective implementation of supply chain management practices in international humanitarian organizations in Kenya.
ii) To assess the influence of inventory management on effective implementation of supply chain management practices in international humanitarian organizations in Kenya.
iii) To assess the influence of executive/ management support on effective implementation of supply chain management practices in international humanitarian organizations in Kenya.

iv) To establish the influence of information sharing/ communication strategy on effective implementation of supply chain management practices in international humanitarian organizations in Kenya.

### 1.4 Research Questions

The study sought answers to the following questions:

i) What is the influence of human capital efficiency on effective implementation of supply chain management practices in international humanitarian organizations in Kenya?
ii) What is the influence of inventory management on effective implementation of supply chain management practices in international humanitarian organizations in Kenya?
iii) What is the influence of management support to effective implementation of supply chain management practices in international organizations in Kenya?
iv) What is the influence of information sharing/ communication to effective implementation of supply chain management practices in international humanitarian organizations in Kenya?

### 1.5 Justification of the Study

The findings of the research is useful to policy makers, donors and humanitarian organizations as it will assist them understand the relationship between service delivery and supply chain in International Humanitarian Organizations. The findings of this study will allow managers and other decision makers to make decisions that will enhance service delivery in International Humanitarian Organizations. Policy makers like the government may find the study invaluable in the application of policies aimed at obtaining effective supply chain management in public organizations. The policy makers may also obtain knowledge of supply chain management dynamics and the responses that are appropriate and specific for both governmental and non-governmental organizations, they may therefore have obtained guidance from this study in designing appropriate policies that can ensure effective logistics management.

The study can be of great importance to procurement managers and board of directors in numerous public companies in Kenya as the study findings can provide a guiding framework for the implementation of supply chain management ethics in government ministries in Kenya. The study is of importance to various supply chain management ethics implementation stakeholders such as, Kenya Institute of supply chain management. United states Agency of International Development, Chartered Institute of Purchasing and supply Management (CIPS), Plan international, World Bank among others since the study findings will help the stakeholders to clearly understand the weakness of supply chain management ethical practices. This can assist in determining the suitable measures to use to support effective implementation of supply chain management ethical practices within the humanitarian organizations. Finally, the research can be helpful to academicians and scholars who do research on supply chain management practices and service delivery in Humanitarian Organizations. Supply chain managers may employ the result of this study to formulate a more responsive supply chain.

**1.6 Scope of the Study**

The study concentrated on the determinants of effective application of supply chain management practices in international humanitarian organizations in Kenya. It took a period of ten years from 2006 to 2015. This study was conducted among international humanitarian organizations in Nairobi, Kenya. Data was collected from the country offices headquarters.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1 Introduction

This chapter involves systematic identification, location and analysis of documents containing information related to the study. Literature review makes it possible for the researcher to come up with a clear and extensive study. It involves evaluation of any already existing literature related to the study to identify gaps in the previous studies.

## 2.2 Theoretical Review

This section discusses theories and models on which the study is anchored. Specifically, the partnership model, resource based view and the contingency theory are discussed.

### 2.2.1 Partnership Model

Partnership model offers a partial foundation for a theoretical framework of ethics in SCM (SCM-ethics). The model comprises four levels of commitment to ethical values and Principles (EVP), namely: ethical culture, to and from staff and shareholders, ethical organizational artifacts, and ethics in the marketplace. The partnership model stresses the importance of companies' commitment to EVP. This model and a pre-study have been used as inspiration to outline different orientations of SCM-ethics (Wood's, 2012). Four alignments of SCM-ethics may be distinguished derived from the relationships of organizations, the market place, the industry, and the society. They are based upon two mechanisms (union and connection), all of which apply to both upstream and downstream directions of corporate behavior and business operations (Rhee & Lee, 2010).

A vertical union strains the EVP in business behavior and business operations in supply chains from the point of-origin to the point-of-consumption, while the horizontal union stresses the EVP in corporate behavior and business operations in the resemblance between supply chains or outside supply chains (Matyusz, 2012). The direct connection of corporate behavior and business operations highlight the EVP in isolation, whereas the

indirect connection of corporate behavior and business operations accentuate the EVP in sequence between supply chains or outside supply chains. All in all, four distinctive orientations of SCM-ethics may be distinguished (Wood's, 2012).

Relationship orientation is the vertical unions between EVP of corporate behavior and business activities (inside a supply chain), but it is limited to direct connections to others EVP in supply chains (either suppliers or customers). This is the most limited method of SCM-ethics. Essentially, it is limited to dyads such as buyer/seller relationships and executive/ management support. The corporate alignment of SCM-ethics at this level is risky, as it only relies upon the atomistic features of EVP in a minor part of supply chains (Matyusz, 2012).

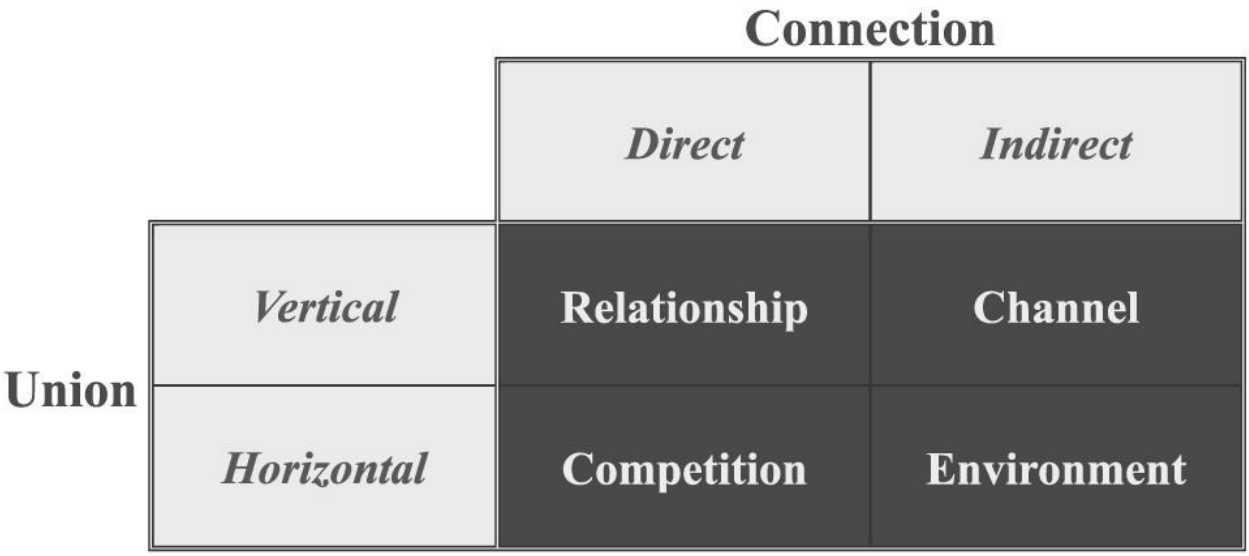
Channel orientation is also to the vertical unions between EVP of corporate behavior and business operations (i.e. inside a supply chain). It also includes indirect connections to other EVP in supply chains (i.e. either suppliers, customers' customers or beyond). This is an extended approach of SCM-ethics compared to the relationship orientation. It includes the whole supply chain from the point-of-origin to the point-of-consumption, all of which consist of the EVP of sequential or connected relationships. The corporate orientation of SCM-ethics at this level is rather sound, but it still neglects the conditions of EVP in the marketplace and society (Huang & Liu, 2014).

Competition (or comparative) orientation goes beyond vertical unions between corporate behaviour and business operations towards horizontal unions of EVP (between supply chains). It comprises direct connections to EVP in other supply chains. This is a widened method of SCM ethics compared to relationship and channel orientations. It stresses the significance of EVP in the marketplace. It has also an emphasis on the EVP of competitors (Roy & Wilkinson, 2004).

Environment orientation refers to the horizontal unions between EVP of corporate behavior/business operations and the community through information sharing/

communication strategy. It includes indirect connections to EVP in the society. This is the broadest tactic of SCM ethics compared to the previous orientations. It stresses the significance of EVP in the society at large. It also has an emphasis on the EVP of other industries and other marketplaces (Wood's, 2012).

**Figure 1: Partnership Model**




**Source: Wood's (2012) P. 37.**

### 2.2.2 Resource Based View Theory

Resource Based View (RBV) Theory explains that identification and ownership of internal strategic resources contributes to a firm's ability to create and uphold a competitive advantage and improve SC performance (Shalakha, 2015). A resource is considered strategic if it meets certain criteria-valuable, non-substitutable, specific or rare and imitable to contribute to enhanced SC performance of the firm (Barney, 2012). Resources must be efficiently managed and exploited given the changing external situations that an organization faces in the competitive business environment (Lippman & Rumelt, 2003).

A resource-based view of a firm explains its ability to offer maintainable competitive advantage when resources are managed such that their results cannot be imitated by

competitors, which eventually creates a competitive barricade (Mahoney & Pandian, 1992). Resource centered theory explains that a firm's sustainable competitive advantage is reached by virtue of exclusive resources being valuable, rare, non-tradable, inimitable, and non-substitutable, in addition to firm-specific (Barney, 2012). These authors write about the fact that a firm may reach an effective SCM through unique resources, which it possesses, and these resources cannot be easily transferred, bought, or copied, and simultaneously, they add value to a firm whereas being rare. It also high-points the fact that not all resources of a firm may add to a firm's effective SCM and therefore sustainable competitive advantage (Mahoney & Pandian, 1992).

Resource Based view offers the understanding that certain unique prevailing resources will result in superior SC performance and eventually build a competitive advantage. Sustainability of such an advantage will be determined by the ability of competitors to emulate such resources. Though, the current resources of a company may not be enough to facilitate the future market requirement, because of volatility of the contemporary markets. There is a significant need to adjust and develop resources such as human capital to encounter the future market competition. Barney (2012) emphasizes the difference between capabilities and resources by defining capabilities as a special type of resource, explicitly an organizationally embedded non-transferable firm-specific resource whose sole purpose is to enhance the efficiency of the other resources owned by the firm.

The resource-centered view has been a common interest for management researchers and various writings could be found for same (Mahoney & Pandian 1992). The RBV of the firm constitutes a theory about the nature of firms, instead of seeking to explain why firms. It is founded on the assumption that resources are heterogeneously scattered across firms, and that this distribution is long lasting. Developing earlier work by the most prominent proponent of the RBV, suggested that a firm's use of "idiosyncratic, immobile" resources is

the source of sustained competitive advantage. This signifies a counter-point to the style of industrial organization economics, which examines a firm's response to its external competitors, but does not examine the "black box" of the internal respective interests in the project management of firm resources. While previous research had supposed that firms in an industry had broadly similar resources (Porter, 2010), highlights the significance of the idiosyncratic attributes of the firm in developing its competitive position.

The theory comprises various management tools and techniques, chiefly developed to assist managers operating in complex settings. Main tenets of the theory comprise acknowledging that resources such as human capital are heterogeneously scattered across firms, they are not perfectly mobile and that this distribution is long lasting. It is thus vital to understand a firm's use of 'idiosyncratic, immobile resources' to maneuver an organization SCM with a minimum of conflict. RBV analysis is chiefly useful in combining bundles of tangible and intangible assets; firms can achieve a sustained competitive advantage. The RBV analysis thus seems like a suitable candidate remedy for the complexity related challenges of the balanced scorecard as a strategic management tool.

In current ultra-competitive global business, a well-managed supply chain is vital to formulate competitive advantage and value to the firm (Lambert &Cooper, 2000). Competition is no longer defined as firm against firm but instead supply chain against supply chain (Min & Mentzer, 2004). When a corporation makes linkages with suppliers and customers it eases the management of the flow and quality of materials into and out of the firm thus the benefits should accrue directly to operational performance (Mistry, 2014). This theory therefore points to the human capital efficiency as an important resource in the implementation of supply chain management practices among international humanitarian organizations.

### 2.2.3 Contingency Theory

Contingency theory states that in diverse situations, different solutions may prove effective (Barney, 2012), rather than propagating universally applicable organization management principles, the theory attempts to demonstrate that different situations necessitate different organization structures (Odhiambo, 2013). Organizations are affected by numerous contingencies including environment, size and technology. These contingencies are responsible for developing the specific structures and activities of an organization. When there is an incongruity between the contingent variables and the structure, the organization will achieve lower performance (Akintoye, McIntosh & Fitzgerald, 2010).

Kalakota and Robinson (2007) argued that in order to enhance supply chain performance for functional and innovative products, a corporation must change its organizational characteristics and organize its supply chain drivers such as management support and information sharing to create an efficient and responsive supply chain (Lee, 2001). Effective supply chain integration will likely be tied to a range of strategic, environmental, human and operations variable. For efficiency and effectiveness, a fit must exists between specific supply chain integration and the strategic and environmental conditions (Christopher, 2011). This therefore opines to the essence of inventory management in the implementation of supply chain management practices.

**2.3 Empirical Review**

Various studies have been done in relation to SCM and humanitarian assistance. Salvage et al (2007) did a study on the risks associated with corruption in humanitarian aid support. The findings were basically affirmative that there is a negative correlation between corruption and the level of donor support in humanitarian aid. However, the study could not divulge other issues that are related to humanitarian aid such as logistics. Either, the environment of study, Afghanistan, is way far different from the Kenyan context.

Nyamu (2012) carried out another significant study. He found out that there is a positive correlation between the nature of the supply chain and the scope of service delivery to the people by humanitarian organizations. His research however dealt purely on the supply chain management challenges that affect humanitarian organizations in Kenya. His work was limited to the scope of logistics and supply chain practices though. Mungatia (2010) study established that World Vision Kenya was responsive to disasters based on the evidence of the many cases that the organization helped in disasters. However, the use of World Vision Kenya as the only case study of disaster response by NGOs limited the way other NGOs responded.

Mohamed, (2012) study was pivotal in that it expunged how supply chain management practices help in the service delivery by humanitarian organizations. However, his study was limited to the performance relationship between supply chains and the service which humanitarian organizations deliver to the people. Moeiny and Mokhlesi (2011) study established that the success of any humanitarian aid support is only through a properly endowed supply chain. However, the economic and political setting of their study was benchmarked on a developed nation, unlike in a developing nation like Kenya.

Mbohwa (2010) discussed the challenges, difficulties and problems faced by humanitarian organizations in running logistics systems in Southern Africa, with a focus of some systems in Zimbabwe. Mini case studies of the operations of the World Health Organization (WHO), the International Red Cross Society and the Zimbabwe Red Cross Society, the World Food Programme, UNICEF and the Zimbabwean Civil Protection Organization were discussed. The research classified the challenges faced as lack of trained logistics personnel, lack of access to specialized humanitarian logistics courses and research information, the difficulty in using and adapting existing logistics systems in attending to humanitarian logistics and lack of collaborative efforts that address the area specifically. The study focused only on Zimbabwe and neighboring countries.

Vorst et al (2002) identified uncertainty as the major challenge facing humanitarian organizations. They stated that uncertainty could stem from many elements relating to the mission, the organization itself or nature of the demand. They further stated that uncertainty might arise from inherent characteristics such as what and how much material is demanded, product traits, process fluctuations and supply problem. Vorst, et al also recognized how supply chain configuration and control structures, long forecast horizons, decision complexity, poor information reliability and agency culture may create uncertainty.

Okwach (2014) conducted a study on supply chain management: theory, practice and future challenges in Europe and identified supply chain management enablers and barriers as transparency of information and knowledge, supply chain behavior and performance measurement and SCM drivers as globalization, outsourcing and fragmentation and to some extent market polarization**.** This study although relevant was conducted in Europe and covered a broader scope than the focus of this study.

Richard (2009) conducted a study of supply chain management practice in UK Industrial SMEs and found that there was lack of effective adaptation of traditional adversarial relationships to modern collaborative e-supply chain and the issues businesses need to address to improve performance of their competiveness by grasping the benefits of effective supply chain management. This study had a main focus on the supply chain relationships and benefits of SCM. In addition, the study engrossed on industrial SMEs in UK hence the findings may not apply to international organizations.

Andebe (2013) conducted a survey of green SCM practices in the textile industry in Kenya and established that the textile industry has adopted green supply chain management practices to a minimal extent. The study in question however did not comment on these particular practices in that industry. In addition, the textile industry in Kenya is rocked with

intense competition from the low cost imports of new and secondhand clothes; hence the practices may not be applicable to international organizations in Kenya.

Kimani (2013) conducted a study on the SCM challenges facing the oil industry in Kenya and established that information technology, supply chain design, partnership/ collaboration and people have a positive impact on the implementation of an effective supply chain management. This was a case study with a narrow focus on the SCM challenges facing the petroleum industry. The findings were therefore not conclusive since it had adopted a narrow focus on SCM challenges as opposed to the broader supply chain management issues.

Awino and Wainaina (2009) conducted a study on SCM best practices of large manufacturing firms in Kenya and concluded that operating policies, linkages with supply chain firms, improved performance, information technology systems, strategic alliances, performance measures, goal orientation, customer services guidelines and procedures, supplier evaluation are the most important supply chain management practices of large private manufacturing firms in Kenya. The paper also established that SCM best practices used in the large firms in Kenya compare well with SCM best practices globally. The practices used in this study had been adopted so as to compare the practices with international organizations in Kenya.

Abdifatah (2013) conducted a study of SCM practices in humanitarian organization in Kenya and identified maintenance of good customer relations, efficient and effective internal operations, continuous improvement, flexible production processes, use of information technology to speed up humanitarian work, inter-organizational integration and simplicity in internal operations to be the prevalent practices among the humanitarian organizations. Although this study was conducted in Kenya, the focus was on SCM practices themselves and not on the determinants of effective implementation of supply chain management practices in international organizations.

### 2.3.1 Human Capital Efficiency and Implementation of Supply Chain Management

Research shows that there are solid interdependencies between supply chain management and Human capital management and hence it is not easy to identify exact boundaries. Additionally, these boundaries are constantly shifting to accommodate an integration of supply chain and human resource (HR) activities. The problem that the SCM professional faces is that managing companywide HR policies to effect coordinated change is often outside his or her management scope. This eliminates the greatest point of leverage in achieving cross-functional integration for those who have such responsibility without commensurate authority. Furthermore, it is tremendously difficult to tailor synchronized HR policies that span functional departments; many SCM professionals lack knowledge and experience in this complex area. If SCM professionals are to be reliably operative, they must have Integrative vision to form integrative, cross-functional, and cross-company programs that enable product to flow rapidly and responsively through the company and the channel. In addition, Human resources ability to harness the power of HR policies to ensure that the programs are implemented effectively throughout the company is also critical (Richard, 2009).

Furthermore, the economic power of cross-functional coordination is becoming broadly recognized, and the first capability is now progressively in evidence in our profession. Unfortunately, though, the second is all too rare. This is a major cause of the classic SCM dilemma, and it is stopping many companies from attaining their objectives. Because efficient, responsive product flow is necessary to strategic success in most firms, focused HRM must become a core element in the SCM professional's portfolio. The main elements that human resource management in supply chains must have are, technology, skills and education, demand of a supply chain talent as well as training & career development. Whereas process and production technology change has been profound, information

management systems and related technology have evolved at a more rapid pace and have had a more profound influence on job design and skill necessities. Technology is most commonly employed for inventory and warehousing management. Looking forward, employers are considering employing technology for transportation, and customer and supplier relationship management. Not surprisingly, larger organizations have employed more supply chain-related information systems than smaller ones (Akintoye, McIntosh & Fitzgerald, 2010).

Skills and Education needs do not vary meaningfully by company size or region, which proposes that supply-chain employees can move between regions with some degree of ease. Employers indicate that communications and analytical skills are an obligation for all occupation categories across all sub-functions. Other common skill necessities include technology, interpersonal and customer service skills. Demand for specific supply chain positions is predominantly anticipated to remain constant, with some growth predicted for positions in logistics information systems tactical and operational, warehousing operational, customer service tactical and transportation operational. There was a general increased reliance on knowledge-based positions (e.g., information technology knowledge, technical logistics knowledge, supply chain specialists) and customer service positions (sales, customer service, client management). Manager-level positions were frequently cited as difficult roles to fill (e.g., functional managers, general managers, project managers, etc.), with supervisor and analyst roles also identified as a challenge.

Anderson, Fornell and Lehmann (2010 perceive that corporations have generally developed skill sets internally. Frahm (2009) alternatively notes that whereas there is an emerging trend to source entry-level planners, analysts and schedulers from universities and colleges, new graduates still need on-the-job training and experience. According to Hau and Amaral (2012), 66% of employers propose that higher education with a logistics/supply chain management or related major is essential when considering new recruits. Tan *et al* (2012)

carried out a study on a comparison of employee education requirements identified by employers to the current education level of employees reveals that. They found that a small percentage of supply chain managers owned an undergraduate degree, whereas the majority of employers needed it for that level; and Tactical and operational employees tended to have a higher level of education than the minimum required by employers for their levels (Tan *et al*, 2012).

In training & career development, Employers show that technical development courses are necessary for supply chain personnel to stay up to date. The most common means of employee development are on-the-job training and external courses. For the most part, employees show that they are content with the training they have gotten and that it has met their needs. The most common forms of support offered to employees are tuition repayment, time off for external courses and the provision of in-house training. Work/study programs for supply chain employees are not commonly used; though, all types are employed to some degree. Internal training inclines to be centered on technical supply chain and logistics development, interpersonal and people management skills (e.g., supervisory skills, negotiations, team building, coaching and leadership) and health and safety (Mistry, 2014).

Given that attraction is one of the most common human resources challenges being faced, and is anticipated to persist as such over the next five years, it is not astonishing that employers also show meeting a variety of recruitment matters (Copacino, 2010). The most common recruitment issue facing employers is finding employees with the skills needed. This may be compounded by other common challenges, which comprise competition for resources, and lack of awareness of/interest in the supply chain sector (Copacino, 2010).

Similar challenges are faced by organizations regardless of size, with organizations identifying ‘finding employees with the skills needed as the most important challenge. Manager and supervisor positions are usually cited as difficult roles to fill, chiefly employees

with general managerial skills. There is an urgent need to attract new qualified resources, as the existing internal growth and development strategy is no longer offering a sufficient pool of qualified resources (Filedman & Miller 2013). According to Harland (2010), attraction to the supply chain sector is a function of interesting work, opportunity to solve problems, opportunities for learning and growth, diversity of tasks, and the role of the supply chain in an organization or industry.

### 2.3.2 Inventory Management and Implementation of Supply Chain Management

Managing inventories efficiently and effectively throughout the supply chain is a vital element for superior supply chain performance. Benefits of lower inventories comprise diminished general supply chain cost, decreased risk of obsolescence, and increased responsiveness and flexibility. General Motors, which was able to decrease cost by 26 percent yearly via better inventory management, serves as an illustrative example (Gunasekaran, 2009). Commonly known for its super-efficient supply chain, Dell effectively uses a build to order and direct sales business models to hold down its inventory to only a four-day supply while shipping 95% of customer order in eight hours (Gowen & Tallon, 2005). Hewlett-Packard depends on postponement approach to minimize forecasting errors and to manage inventory and production. The use of information technology to help with inventory control decisions can be considered another best practice in material management. IT systems play a crucial role in the supply chain as it assists corporations collect and analyze information (Chopra & Meindl, 2004).

Inventory flow management entails planning and building design for the movement of materials or with logistics that deal with the components that are tangible in supply chain (Christopher, 2012). Mainly it covers the attainment of spare parts and replacements, quality control of purchasing and ordering, shipping standards and warehousing. The material requirement planning system utilizes data from the master schedule and the inventory system.

It then breaks the master schedule items into sub-assembly and raw material requirements matches these against what is already on hand and computes specific requirements (item by item) of everything required. It states when orders should be releases so that components will be available as specified in the proposed master schedule. The master schedule is not revised if procurement or production time is inadequate (Goldsby, 2003).

Therefore, computer software applications should be used to calculate order quantities, based on demand forecasting, and safety stock levels. This can significantly reduce user interventions and time spent in order processing (Kim, 2005). Moreover, having high inventory turn signifies another benefit for international organizations. By increasing the number of inventory turns, international organizations can hold less inventories leading to less capital invested at any given time (Alverson, 2003). Last minute customization can be done according to actual demand, with managing and predicting inventory of generic products being more efficient. Other developments and best practices in this area comprise vendor managed inventory (VMI – an approach where the supplier manages inventory at the customer's location), quick response manufacturing (QRM – an approach to reduce lead times), and efficient consumer response (ECR – an approach to create the best value for the customer at the lowest cost).

The activities related with efficiently managing inventories include then some of the following activities; use of direct sales and build-to-order model, use of postponement strategy to reduce finished goods inventories, use of information technology (EDI or RFID) up and down the supply chain to share demand and manufacturing information to reduce component and finished goods inventories. Others include, use of the internet to share demand and manufacturing information up and down the supply chain to reduce inventory cost, strive for product availability without increasing service levels to compete in the market place, use of vendor-managed inventories (VMI) to manage inventories effectively, use of

Quick Response (QR) Code to manage inventories efficiently, use of efficient consumer response (ECR) to manage inventories effectively and efficiently, use of just-in-time (JIT) to reduce inventories and lastly collaboration with suppliers and customers for better inventory management and replenishment (Burns, 2012).

A study by Laundry (2010) showed that the main challenges that managers in inventory flow management encounter is maintaining a consistent flow of materials for production. Factors that hinder accuracy of inventory hindering effective production include; incorrect bills of materials, imprecise cycle counts, shipping errors, un-reported scrap, receiving errors and production reporting errors. Another central challenge that managers in material flow management face is the provision of timely release to the supply base.

### 2.3.3 Management Support and Implementation of Supply Chain Management

Executive support has been cited by many authors, including Nelson et al (2001), as a crucial characteristic for fruitful supply chains. Callender (2007) in a study observed that a significantly high proportion of respondents (45%) reported that they agree with this statement. Additionally, 7.8% disagreed with the statement, and 15.8% of participants showed a neutral position. Likewise, McKone-Sweet et al (2005) found that lack of executive support is a big a barrier to effective application of SCM practices. Top management participation and their vision play an important role in reshaping an organization's belief and orientation in attaining a strong foundation of trust, interdependency, commitment, organization's strategy and reducing conflicts in reaching agreements among collaborative partners.

Managerial support presents four supporting facets to ensure the proposed practices are fully applied in industries. They include; Management responsibility. Higher degree of management commitment and leadership is very crucial for the implementation of supply chain management practices. Furthermore, the organizational culture may have some contributing factors to the failure or success of any application. The fundamental

management systems in organizations cannot also be ignored or abandoned. Correspondingly, resource management is an indispensable requirement to provide for an interactive training programme to aid organizations in achieving an operational excellence like employee development, infrastructure and work environment (Andebe, 2013).

### 2.3.4 Information Sharing and Implementation of Supply Chain Management

Information sharing and communication play a significant role in supply chain management practices application. Information and communication strategy allows sharing of information which is a vital element in sharing of new ideas and concepts (Jack, Powers & Skinner, 2010). Information sharing ideas and concepts act as catalysts towards effective application of supply chain management. Innovation in supply chain highly relies on ideas and concepts that can best be conveyed through use of information communication technology to enhance the way of doing things. Most corporations that have thrived in the application of innovation in supply chain management invest largely in modern technologies for instance information communication technology. ICT enhances systems and processes; it allows firms to perform their operations in a more efficient manner, at a decreased cost (Kazi, 2012).

Sharing information across a supply chain can greatly decrease disorganizations by better matching demand with supply. In their research on major hindrance for applying SCM practices in the healthcare sector observed that about 40% participants showed that there is limited information sharing between sellers and healthcare providers, 30% of participants disagreed, and another 30% remained neutral. Though responses were divided, the majority expressed that there is a lack of information sharing which represents a major barrier. Again, results for this section seem to be consistent with those who documented that information sharing is a barrier for implementation (Burns, 2012). Successful implementation of information in the application of supply chain management practices has the effect of reducing levels of complexity. Senge (2010) defines two types of complexity, detail and

dynamic. Detail complexity exists when there are many variables needing to be managed. Dynamic complexity exists where cause and effect are separated, and difficult to associate, in both time and space.

The “bullwhip effect” is an instance of a typical supply chain management consequence resulting from situations that are dynamically complex, and was first highlighted by Forrester (1961). According to Chen et al (2010), this spectacle states that the demand process seen by a given stage of a supply chain becomes more variable as we move up the supply chain (i.e. as one move away from customer demand). In other words, the orders seen by the upstream stages of a supply chain are more variable than the orders seen by the downstream stages. Symptomatic of this effect are low customer service levels, excessive inventories, inaccurate and untimely capacity planning, lost income, increased transportation costs and ineffective production scheduling (Lee et al., 2007). Lee et al (2007) also state that access to, and management of, information is critical to minimizing this type of variation. Innovative companies in different industries have found that they can control the bullwhip effect and improve their supply chain performance by coordinating information and planning along the supply chain.

Provenance of causes for the bullwhip effect have varied as it was first observed. Forrester would say that the behavior in the system is a function of the interaction of structure. I.e. effective organization structure and information sources, delays and amplification (the inherent effects of policies) Sterman (1989) sees the primary effects as being irrational Handfield and Nichols (1999) summarize the potential for information technology applications for supply chain integration. With the emergence of the personal computer, optical fibre networks, the explosion of the Internet and the World Wide Web, the cost and availability of information resources allows easy linkages and eliminates information related time delays in any supply chain network.

Bowersox and Calantone (2005) state that the notion of a combined supply chain is not a new one, but that it has only recently become feasible as corporations have access to information that is timely, accurate and affordable. They also make the point that information is the only element in the supply chain that has become less expensive over time. An example of this trend is the swelling use of e-mail for communication both within companies and between trading partners.

At a nominal cost email is being utilized to transfer word processor files, design documentation and CAD files, spreadsheets and trading documents like orders and invoices between trading partners (Braue, 2009). The breadth of applications and uses that e-mail is being put to in the streamlining of supply chain communications is often under-estimated. The use of e-mail is a crucial facilitator of better communications and relationships between trading partners in an international context (Carter, 2000).

### 2.3.5 Supply Chain Management (SCM)

Supply chain management (SCM) can be referred to as all the events involved in delivering a product from raw materials through to the customer, including sourcing parts and raw materials, manufacturing and assembly, warehousing and inventory tracking, distribution across channels, delivery to the customer, order entry and order management, and the information systems necessary to monitor these activities (Lummus & Vokurka, 2008). Six constructs have been developed from supply chain management practices which are; supply chain integration, chain characteristics, information sharing, supply customer service management and JIT capability (Tan, 2012).

Humanitarian supply chain management (HSCM) is referred to as the process of effective and cost-efficient plans, implementations and controls for aid flows (i.e., materials, goods, services, financial resources, information, etc.) from the point of origin to the point of consumption with the intention of meeting the aid recipients' requirements (Day et al., 2012).

As a subset of supply chain management, it covers almost all of the functional processes that a commercial supply chain management (CSCM) does, including processes such as sourcing, procurement, inventory management, logistics and distribution, information management, and so forth (Day et al., 2012). However, unlike the “financial” objectives of CSCM, the primary goal for HSCM is to minimize human suffering -- more specifically to prevent further loss of life and harm to humans, as well as provide immediate treatment to those with injuries and illness (Beamon & Balcik, 2008).

On the other hand, as have been discussed by some researchers, humanitarian supply chains operate under highly uncertain conditions relative to commercial supply chains (Wassenhove, 2011). First of all, the unpredictability of disaster occurrence and the magnitude of damage make forecasting extremely difficult. Second, the typical collapse of infrastructure in the affected area severely inhibits aid to the disaster region. Third, the humanitarian supply chain network is temporary making the management of the whole system especially challenging. Meanwhile, raising the necessary financial and material resources is difficult to predict because each disaster is unique. These factors collectively shape humanitarian supply chain as a complex and delicate system, thereby making the management of humanitarian supply chains more challenging compared to CSCM.

These unique characteristics of humanitarian supply chains require a high level of agility, flexibility and effectiveness (Abdifatah, 2013). Since saving lives and reducing human suffering are top priorities during disaster, the management philosophies accordingly differ from those of CSCM. For example, distinct from the traditional cost minimization and profit maximization objectives for CSCM, the objective of HSCM is minimizing social costs, which is comprised of both supply chain costs and deprivation costs (Abdifatah, 2012).

## 2.4 Critique of Literature

Literature suggests that organizations operate under different situations, and hence different solutions may prove effective (Antal, 2010). Rather than propagating universally applicable organization management principles, the contigency theory tries to demonstrate that various situations necessitate different organization structures (Baranyi, 2010). Organization are influenced by several contingencies comprising size, environment and technology and when there is a mismatch between these variables and the structure, the organization will attain lower performance (McGovern &Earl, 2001). Supply chain management enablers and hinders as transparency of information and knowledge, supply chain behavior and performance measurement and SCM drivers as globalization, outsourcing and fragmentation and to some extent market polarization are some of the supply chain management enablers (Storey, *et al* 2011).

In another study conducted by Andebe (2013); a research of green SCM practices in the textile industry in Kenya, the researcher established that the textile industry has adopted green supply chain management practices to a minimal extent. However, the study did not comment on these particular practices in that industry. Furthermore, the textile industry in Kenya is rocked with intense competition from the low cost imports of new and secondhand clothes; thus, the practices may not be valid to international humanitarian organizations in Kenya. Moreover, Quayle (2003) conducted a study of supply chain management practice in UK Industrial SMEs and found that there was lack of effective adaptation of traditional adversarial relationships to modern collaborative e-supply chain and the issues businesses need to address to improve performance of their competiveness by grasping the benefits of effective supply chain management. This study had a focus on the supply chain relationships and benefits of SCM. In addition, the study focused on industrial SMEs in UK hence the findings may not apply in Kenya.

In Kenya, Awino and Wainaina (2009) conducted a study on SCM best practices of large manufacturing firms in Kenya. They concluded that operating policies, improved performance linkages with supply chain firms, information technology systems, strategic alliances, goal orientation, performance measures, customer services guidelines and procedures, supplier evaluation are the most significant supply chain management practices of large private manufacturing firms in Kenya. The paper also found that SCM best practices used in the large firms in Kenya compare well with SCM best practices globally. From the literature reviewed by the researcher, it is observable that there is no general consensus on the determinants of effective implementation of supply chain management practices in international organizations in Kenya. This study will therefore seek to determine in totality the factors that affect implementation of supply chain management practices among the international humanitarian organizations in Kenya.

**2.5 Research Gaps**

Several studies have been carried out in the field of supply chain management. Huang and Liu (2014) re-examining supply chain integration and suppliers' performance relationships of manufacturing firms, found that use of modern technologies led to improved organizational performance. Nevertheless, the study limited itself to supply chain integration. Roy and Wilkinson (2004) studied innovation generation in supply chain relationships. The study showed that innovation is an essential tool in supply chain relationships. Additionally, it was revealed that supply chain innovation led to diminished costs. This study laid much focus on innovation generation and supply chain relationships ignoring the other aspects of supply chain management such as the determinants of effective implementation.

Correspondingly, Rhee and Lee (2010) investigated the drivers of innovativeness and performance for innovative SMEs in South Korea. The findings of the study showed that innovation was a crucial driver towards realization SME's performance in South Korea.

Storey *et al* (2011) conducted a study on Supply chain management: theory, practice and future challenges in Europe and identified supply chain management enablers and blocks as transparency of information and knowledge, supply chain behavior and performance measurement and SCM drivers as globalization, fragmentation and outsourcing and to some extent market polarization. This study although applicable was conducted in Europe and covered a broader scope than the focus of this study. The major shortcoming of this study is that the study limited itself on SMEs.

Miyare (2014) sought to determine supply chain practices and their effects on firm profitability at KenolKobil Limited. The researcher used correlational design and found that there was a strong correlation between supply chain practices and firm profitability. This was too general and focused on supply chain practices KenolKobil only. In addition, Livohi (2012) sought to determine the implementation of Performance measurement by Oil marketing companies (OMCs) in Kenya. The study showed that performance measurement was a tool for enhancing performance by OMCs in Kenya. However, the study limited itself to performance measurement in oil marketing companies in Kenya and the findings may not be applicable to international organizations more so humanitarian organizations. Lastly, Barua (2013) examined challenges facing implementation of supply chain management by oil marketing companies. The researcher discovered that the main challenges were inadequate funds to invest in modern technology, resources and facilities, innovation and incompetent personnel. The study was limited to only three challenges of implementing supply chain management.

As observed, recent literature show that researchers limited their research undertakings into effects of supply chain management strategies on the performance of firms mainly expressed inform of profitability but not the determinants of effective implementation. Additionally, many of the studies that have been conducted concentrated on profit

maximizing firms ignoring humanitarian organization. This shows that there lacks specific study that has effectively addressed the major determinants of supply chain management practices implementation in the international organizations in Kenya and this has left a major knowledge gap. The outcome is that there is a need for a more comprehensive study that gives recommendations on the determinants of effective application of supply chain management practices in international humanitarian organizations in Kenya. This study narrowed its research undertakings into these determinants where a major knowledge gap existed in order to strengthen determinants of supply chain management practices in Kenya.

## 2.6 Conceptual Framework

In this study, the conceptual framework will look at the determinants of effective implementation of supply chain management practices in international humanitarian organizations in Kenya.

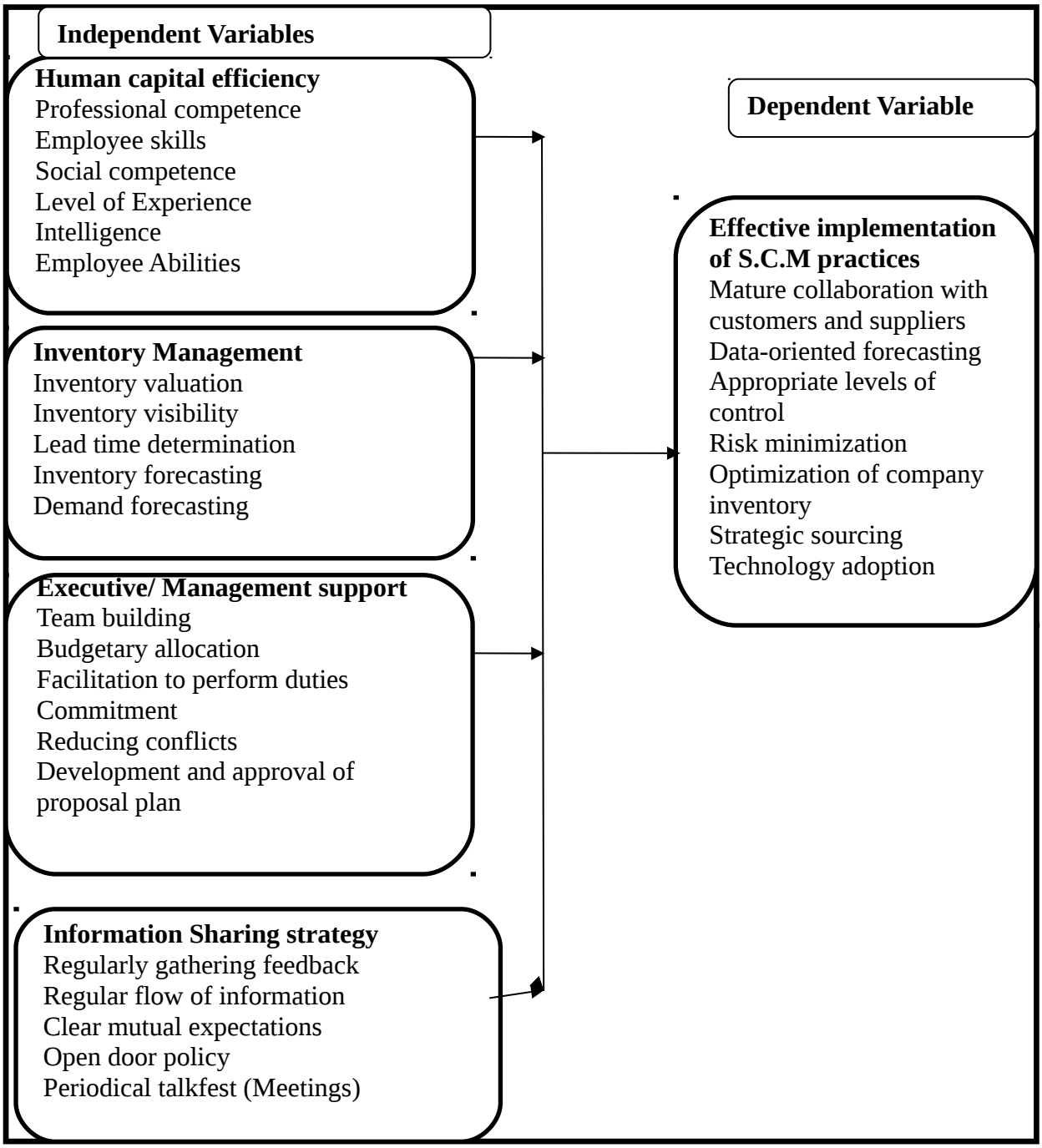



**Figure 2: Conceptual Framework**

Human capital efficiency is anticipated to have strong interdependences with supply chain management. With enough and well-articulated human capital, the organization will be able to apply supply chain management activities. Inventory management comprising valuation and forecasting is also vital in supply chain management application. This study expects a positive relationship between the two variables. Executive support is a key characteristic for successful supply chain management. This study expects a significantly high relationship between executive support effective implementation of supply chain management practices. Contradictory goals concerning inventory choices in the organizational supply chain has been found to be a barrier in the application of supply chain management practices. This study expects a negative relationship between contradictory goals and application of supply chain management practices. Information sharing and communication play a significant role in supply chain management practices implementation. Information and communication strategy permits sharing of information, which is a crucial component in sharing of new ideas and concepts. This study thus expects a positive relationship between sharing of information and of supply chain management practices implementation. Firm characteristics also referred to as emporographics or firm demographics are sets of characteristics to segment prospect organizations variables allow to consider the features of organizational behavior in details. Fir characteristics are expected to influence all variables positively but for conflicting goals which is expected to be negatively influenced.

**2.7 Research Hypothesis**

The researcher sought to address the following hypothesis

$H_{01}$: *There is no significant relationship between human capital efficiency and effective implementation of supply chain management practices in international organizations in Kenya*

$H_{02}$: *There is no significant relationship between inventory management and effective implementation of supply chain management practices in international organizations in Kenya.*

$H_{03}$: *There is no significant relationship between executive/ management support and effective implementation of supply chain management practices in international organizations in Kenya.*

$H_{04}$: *There is no significant relationship between information sharing/ communication strategy and effective implementation of supply chain management practices in international organizations in Kenya.*

## 2.8 Operationalization of Variables

**Table 1: Operationalizaton of Variables**

| Objective | Variable Type | Indicators | Data analysis |
|---|---|---|---|
| To determine the role of human capital efficiency on effective implementation of supply chain management practices in international organizations in Kenya. | **Independent** Human capital efficiency | Professional competence<br>Employee skills<br>Social competence<br>Level of Experience<br>Intelligence<br>Employee Abilities | Descriptive<br>Regression |
| To explore the influence of inventory management on effective implementation of supply chain management practices in international organizations in Kenya. | **Independent** Inventory Management | Inventory valuation<br>Inventory visibility<br>Lead time determination<br>Inventory forecasting<br>Demand forecasting | Descriptive<br>Regression |
| To assess the role of executive/ management support on effective implementation of supply chain management practices in international organizations in Kenya. | **Independent** Executive/ Management support | Team building<br>Budgetary allocation<br>Facilitation to perform duties<br>Commitment<br>Reducing conflicts<br>Development and approval of proposal plan | Descriptive<br>Regression |
| To establish the role of information sharing/ communication strategy on effective implementation of supply chain management practices in international organizations in Kenya. | **Independent** Information Sharing/ Communication strategy | Regularly gathering feedback<br>Regular flow of information<br>Clear mutual expectations<br>Open door policy<br>Periodical talkfest (Meetings) | Descriptive<br>Regression |
| | **Dependent** Effective implem entation of S.C.M practices | Mature collaboration with customers and suppliers<br>Data-oriented forecasting<br>Appropriate levels of control<br>Risk minimization<br>Optimization of company inventory<br>Strategic sourcing<br>Technology adoption | Descriptive<br>Regression |

## 2.9 Summary of Literature

An analysis and review of past studies reveals that little research has been done with a specific focus on supply chain management practices implementation in the Kenyan context more so in the humanitarian international organizations. Past studies on supply chain management practices both in Kenya and internationally have been very general. Most of these studies have been conducted in manufacturing industries, small and Medium Enterprises (SMEs) and banking industry, with very few of them focusing on international organizations.

Literature has reported that SCM contribute significantly to an organization's performance and to bring a competitive advantage among businesses. Li *et al* (2004) has explored that organization with higher SCM level has higher competitive advantage and performance. Therefore, SCM can be regarded as one alternative strategy to improve the organizational performance. Forward-thinking firms have emerged as the star in competitions because of their intensive management in supply chain. Willianson (1983) found some factors affecting the integration of supply chains, such as: internal resource and environment uncertainty. Internal resource, or recently known for its IT context, tend to drive these firms to be unique, rare, more valuable, and more competitive (Zhang & Dhaliwal, 2009). Environmental uncertainty as identified in several economic, manufacturing, and supply chain literatures is considered to be a cause factor in selecting SCM policy.

It appears that supply chain management practices, benefits and challenges vary from one industry to another. There is no universally accepted set of SCM practices that apply to all organizations, large or small. There still exists conflict in the literature in terms of the common SCM practices adopted by SMEs and international organization. In view of the absence of any past surveys focusing on determinants of effective implementation of supply chain management practices in international humanitarian organizations in Kenya, this study

therefore seeks to identify the factors influencing effective implementation of supply chain management practices adopted by international organizations in Kenya.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter highlights the research design, the study variables, the study area, the study population, sampling techniques and sample size determination, construction of research instruments, pilot study, validity and reliability of the instruments, methods of data collection and data analysis.

## 3.2 Research Design

This study employed descriptive survey design; the design was the most appropriate since it ensured 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 Target Population

The population of this study comprised of all the employees in the management level of the 21 humanitarian organizations operating in Nairobi, Kenya as identified by the Relief web in 2016. The respondents were top management, middle level management and some low level management staff. A total of 189 management employees have been identified to form the population.

**Table 2: Target Population**

| Sector | Frequency | Percentage |
|---|---|---|
| Education | 18 | 9.5 |
| Emergency response | 21 | 11.1 |
| Food Security/Livelihoods | 5 | 2.6 |
| Governance | 27 | 14.3 |
| Health | 32 | 16.9 |
| Nutrition | 45 | 23.8 |
| Protection | 14 | 7.4 |
| Shelter & NFI | 7 | 3.7 |
| WaSH | 20 | 10.6 |
| **Total** | **189** | **100.0** |

*Source: HR records (2015)*

### 3.4 Sampling and Sampling Procedure

This research study used a stratified random sampling method to select and sample the respondents. The study therefore selected 127 respondents. According to Mugenda and Mugenda (2003), a sample size of 10% - 30% is a good representation of the target population and is large enough so long as it allows for reliable data analysis. A sample population of 127 was arrived at by calculating the target population of 189 with a 95% confidence level and an error of 0.05 using the below formula taken from Kothari (2004).

$$n = \frac{z^2.N.\partial_p^2}{(N-1)e^2 + z^2\partial_p^2}$$

Where; $n$ = Size of the sample,

$N$ = Size of the population and given as 189,

e = Acceptable error and given as 0.05,

$\partial p$ = The standard deviation of the population and given as 0.5 where not known,

Z = Standard variate at a confidence level given as 1.96 at 95% confidence level.

**Table 3: Sampling Frame**

| Sector | Population (Frequency) | Sample Ratio | Sample size |
|---|---|---|---|
| Education | 18 | 0.67 | 12 |
| Emergency response | 21 | 0.67 | 14 |
| Food Security/Livelihoods | 5 | 0.67 | 3 |
| Governance | 27 | 0.67 | 18 |
| Health | 32 | 0.67 | 22 |
| Nutrition | 45 | 0.67 | 30 |
| Protection | 14 | 0.67 | 9 |
| Shelter & NFI | 7 | 0.67 | 5 |
| WaSH | 20 | 0.67 | 13 |
| **Total** | **189** | | **127** |

### 3.5 Research Instrument

The primary research data was collected from the top management, middle and low level management using a self administered semi structured questionnaire.

### 3.6 Validity and Reliability of the Instrument

Content validity which is employed by this study was a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. To establish the validity of the research instrument the researcher sought opinions of experts in the field of study especially the lecturers in the department of business administration. This helped to improve the content validity of the data that was to be collected.

The researcher conducted a pilot on a group of 20 individuals from the target population to test the reliability of the research instruments. The researcher used the most common internal consistency measure known as Cronbach's alpha (α). The recommended value of 0.7 was used as a cut-off of reliabilities (Orukoh, 2007). The overall Cronbach's alpha value of the instrument was 0.93875. This therefore depicts that the research instrument was reliable and therefore required no amendments.

### 3.7 Data Collection Procedure

The researcher administered the questionnaire individually to all respondents. Care and control by the researcher was exercised to ensure all questionnaires issued to the respondents were received. To achieve this, the researcher maintained a register of questionnaires, which were to be sent, and those received. The questionnaires were administered using a drop and pick later method to the sampled respondents.

### 3.8 Data Processing and analysis

The quantitative data collected was analyzed using descriptive statistics such as frequency, percentages, mean and standard deviation using SPSS version 21 and Microsoft excel. The findings were presented using frequency tables and graphs. In addition, a multivariate regression model was applied to determine the relative importance of each of the five variables with respect effective implementation of supply chain management practices in international organizations in Kenya. The regression model was as follows:

$$\boldsymbol{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where:

Y = effective implementation of supply chain management practices

$\beta_0$ = Constant (coefficient of intercept)

$B_1 \ldots B_5$= regression coefficient of five variables.

$X_1$= Human capital efficiency

$X_2$= Inventory Management

$X_{3=}$ Executive/ Management support

$X_{4=}$ Information Sharing/ Communication strategy

$\varepsilon$ = Error term

Inferential statistics such as non-parametric test which include Analysis of Variance (ANOVA) was used to test the significance of the overall model at 95% level of significance.

According to Mugenda and Mugenda (2003), ANOVA is used because it makes use of the F – test in terms of sums of squares residual.

# CHAPTER FOUR

# DATA ANALYSIS, FINDINGS AND DISCUSSION

## 4.1 Introduction

This chapter discusses the findings obtained from the primary instrument used in the study. It discusses the characteristics of the respondents, their opinions on determinants of effective implementation of supply chain management practices in international humanitarian organisation in Kenya. In order to simplify the discussions, the researcher provided tables and graphs that summarize the collective reactions of the respondents

### 4.1.1 Response Rate

The study targeted 189 top, middle and low managers of humanitarian organisation in Kenya with branches in Nairobi. Out of 127 questionnaires administered as per the sample size calculated a total of 95 filled questionnaires were returned giving a response rate of 74% which is within what Mugenda and Mugenda (2003) prescribed as a significant response rate for statistical analysis and established at a minimal value of 50%.The study made use of frequencies (absolute and relative) single response questions. For matrix questions, the study used six constructs in collecting and analyzing where a scale of 5 points was used in computing the mean scores and standard deviations. These were then presented in tables as appropriate with explanations being given in prose.

### 4.1.2 Reliability Analysis

A pilot study was carried out to determine reliability of the questionnaires. The pilot study involved 20 respondents. Reliability analysis was subsequently done using Cronbach's Alpha which measures the internal consistency by establishing if certain items within a scale measure the same construct. Orukoh (2007) established the Alpha value threshold at 0.7, thus forming the study's benchmark. Cronbach Alpha was established for every concept which formed a scale. This illustrates that all the four scales were reliable as their reliability values

exceeded the prescribed threshold of 0.7. This therefore depicts that the research instrument was reliable and therefore required no amendments as per table 4.

**Table 4: Reliability Analysis**

| | Cronbach's Alpha |
|---|---|
| Human capital efficiency | .933 |
| Inventory management | .871 |
| Management support | .993 |
| Information sharing | .958 |
| Overall scale | .93875. |

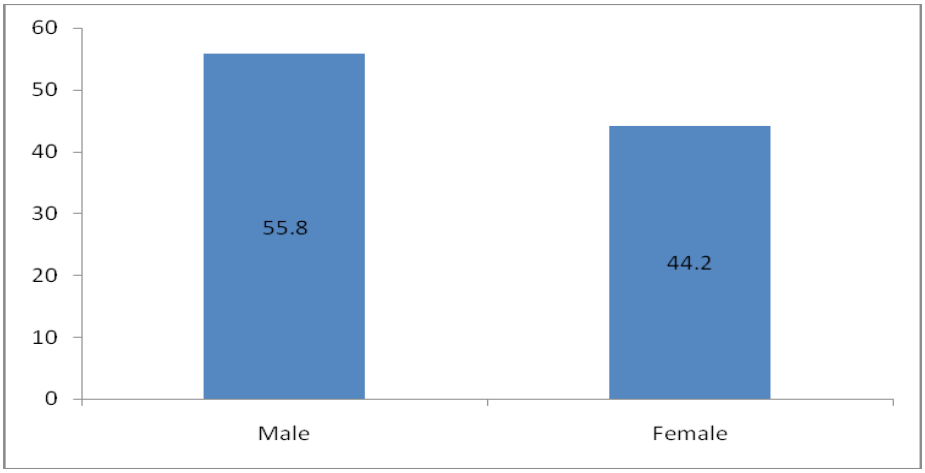
### 4.2 Demographic Information of Respondents

The study sought to enquire on the respondents' general information including gender, highest academic qualification and the experience.

#### 4.2.1 Gender of the Respondents

The researcher wanted to know who the gender of the respondent was. The results were as shown in the figure 3.

**Figure 3: Gender of the Respondents**

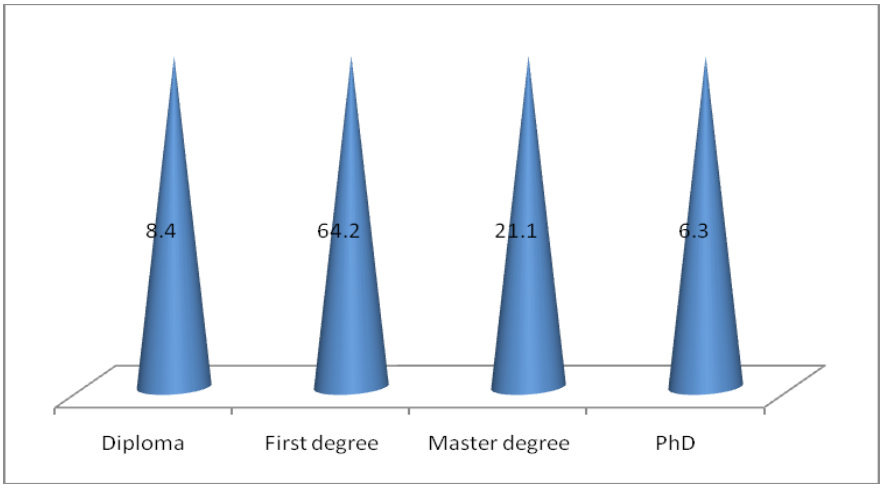



The findings in figure 3 indicated that male respondents were 55.8 % while female respondents were 44.2%. This shows that the researcher was not biased since he considered both gender in his study but there were more male than female.

#### 4.2.2 Education Level of the Respondents

The respondents were further requested to indicate their education level. The results were as shown in the figure 4.

**Figure 4: Education Level of the Respondents**

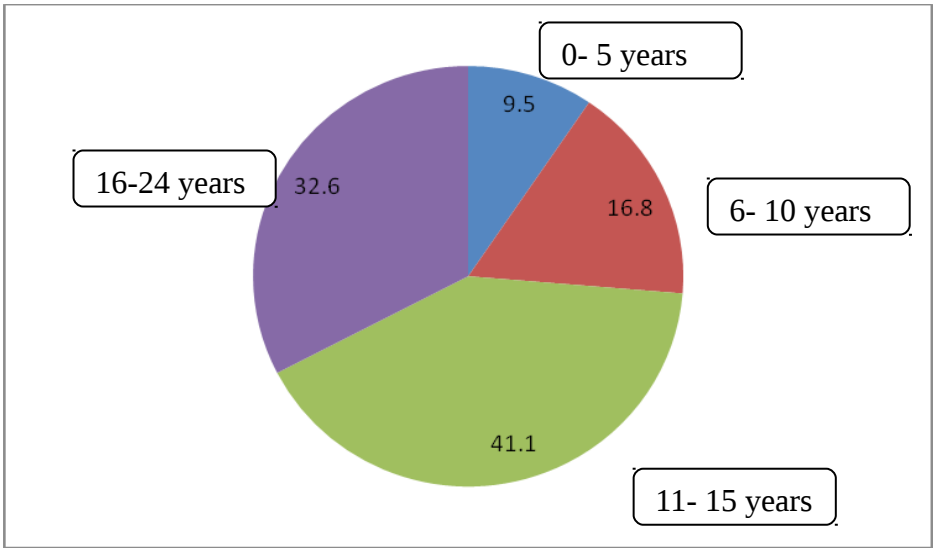



From the findings in figure 4, 64.2% of the respondents indicated that their education level was the bachelor's degree level, 21.1% were masters' holders, and 8.4% indicated the diploma level while 6.3% indicated the PhD. As per the findings majority of the respondents were degree holders. This suggests that the respondents were well conversant with the issues relating to supply chain management practices in international humanitarian organisations and therefore they gave accurate and relevant information needed for the study.

### 4.2.3 Duration Respondents had worked in the Organization

The respondents were also requested to indicate the duration of time they had worked in the organization .The responses obtained are shown in the figure 4.3.

**Figure 5: Duration Respondents had worked in the Organization**




As per the findings in figure 5, a majority of the respondents had worked in the organization between 11 and 15 years representing 41.1% of the total respondents, those who had worked between 16-24 years were 32.6%, those who had worked between 6 and 10 years were 16.8%, those managers who had worked in the humanitarian organisation between 0 and 5 years are only representing 9.5%. The findings indicated that majority of the respondents had worked in the organization between 11 and 15 years. This implies that the respondents were well conversant with the supply chain procedures at the international humanitarian organisations and therefore they gave the correct and accurate information the researcher needed for the study.

### 4.3 Determinants of Effective Implementation and Supply Chain Management Practices

Supply chain management (SCM) can be referred to as all the events involved in delivering a product from raw materials through to the customer, including sourcing parts and raw materials, manufacturing and assembly, warehousing and inventory tracking, distribution across channels, delivery to the customer, order entry and order management, and the information systems necessary to monitor these activities (Lummus & Vokurka, 2008).

#### 4.3.1 Human Capital Efficiency

The respondents had to indicate the extent at which human capital efficiency influences supply chain management practices in humanitarian organization in Kenya. The responses are indicated in table 5.

**Table 5: Extent at which human capital efficiency influences SCM**

| | Frequency | Percent |
|---|---|---|
| Little extent | 15 | 15.8 |
| Moderate extent | 24 | 25.3 |
| Great extent | 36 | 37.9 |
| Very great extent | 20 | 21.1 |
| **Total** | **95** | **100.0** |

From the findings in table 5, 37.9% of the respondents indicated that human capital efficiency determines effective implementation of supply chain practices to a great extent, 25.3% indicated moderate extent. It was also indicated with 21.1% that human capital efficiency determines effective implementation of supply chain practices to a very great extent. Only 15.8% indicated that human capital efficiency determines effective implementation of supply chain practices to a little extent. This implies that that human capital efficiency determines effective implementation of supply chain management practices to a great extent.

**Table 6: Extent aspects of human capital efficiency affect implementation of SCM**

| | Mean | Std. Deviation |
|---|---|---|
| Professional competence | 3.6316 | 1.32931 |
| Employee skills | 4.3684 | 1.06244 |
| Social competence | 2.4526 | 1.14640 |
| Level of Experience | 3.3368 | 1.43372 |
| Intelligence | 3.3579 | 1.30397 |
| Employee Abilities | 4.1368 | 1.26836 |

The respondents in table 6 indicated with mean 4.3684 that employees' skills determine effective implementation of supply chain to a great extent. It was indicated with mean of 4.1368 that employee abilities also influences effective implementation of supply chain management practices to a great extent. Respondents further indicated with a mean of 3.6316

that professional competence determines effective implementation of supply chain management practices to a great extent. Intelligence was also noted with mean of 3.3579 that moderately determines supply chain management practices implementation. The respondents also indicated with a mean of 3.3368 that level of experience determine implementation of the supply chain practices to moderate extent. Finally social competence has a little extent with mean of 2.4526 in determining effective implementation of supply chain management practices in international humanitarian organizations.

### 4.3.2 Inventory Management

The respondents were requested to indicate the extent at which inventory management affects supply chain management practices in humanitarian organization in Kenya. The responses are indicated in table 7.

**Table 7: Extent to which inventory management influences SCM**

| | Frequency | Percent |
|---|---|---|
| Little extent | 16 | 16.8 |
| Moderate extent | 19 | 20.0 |
| Great extent | 37 | 38.9 |
| Very great extent | 23 | 24.2 |
| **Total** | **95** | **100.0** |

According to the findings in table 7, 38.9% of the respondents indicated that inventory management affects effective implementation of supply chain practices to a great extent, 24.2% indicated very great. It was also indicated with 20.0% that inventory management determines effective implementation of supply chain practices to a moderate. Only 16.8% indicated that inventory management affects implementation of supply chain practices to a little extent. The finding implies that inventory management affects effective implementation of supply chain management practices in international humanitarian organizations in Kenya to a great extent.

**Table 8: Extent that aspects of inventory management affect implementation of SCM**

| | Mean | Std. Deviation |
|---|---|---|
| Inventory valuation | 4.0526 | 1.36342 |
| Inventory visibility | 3.2105 | 1.28738 |
| Lead time determination | 3.5579 | 1.32662 |
| Inventory forecasting | 2.8000 | 1.32569 |
| Demand forecasting | 4.4632 | 1.01908 |

The respondents in table 8 indicated with mean 4.4632 that demand forecasting affects implementation of supply chain to a great extent, it was indicated with mean of 4.0526 that inventory valuation also influences effective implementation of supply chain management practices to a great extent. Respondents further indicated with a mean of 3.5579 that lead time determination determines effective implementation of supply chain management practices to a great extent. Inventory visibility was also noted with mean of 3.2105 that it moderately determines supply chain management practices implementation. The respondents also indicated with a mean of 2.8000 that inventory forecasting determine implementation of the supply chain practices to moderate extent.

### 4.3.3 Management Support

The respondents were asked to indicate the extent at which management support affects supply chain management practices in humanitarian organization in Kenya. The responds are indicated in table 9.

**Table 9: Extent to which management support influences SCM**

| | Frequency | Percent |
|---|---|---|
| Little extent | 11 | 11.6 |
| Moderate extent | 21 | 22.1 |
| Great extent | 39 | 41.1 |
| Very great extent | 24 | 25.3 |
| **Total** | **95** | **100.0** |

From the findings in table 9, 41.1% of the respondents indicated that management support affects effective implementation of supply chain practices to a great extent, 25.3% indicated

very great extent. It was also indicated with 22.1% that management support affects effective implementation of supply chain practices to a moderate. 11.6% of the respondents indicated that management support affects implementation of supply chain practices to a little extent. Since none of the respondents indicated no extent implies that all respondents agree that management support affects effective implementation of supply chain management practices in international humanitarian organizations in Kenya. The findings agree with Nelson et al (2001) that executive support is a crucial characteristic for fruitful supply chains

**Table 10: Extent aspects of management support affects implementation of SCM**

| | Mean | Std. Deviation |
|---|---|---|
| Team building | 4.1368 | .96327 |
| Budgetary allocation | 3.6737 | 1.35617 |
| Facilitation to perform duties | 3.2105 | 1.28738 |
| Commitment | 3.5579 | 1.32662 |
| Reducing conflicts | 3.1789 | 1.23752 |
| Development and approval of proposal plan | 4.3895 | 1.07481 |

The respondents indicated in table 10 with mean 4.3895 that development and approval of proposal plan affects implementation of supply chain to a great extent, it was indicated with mean of 4.1368 that team building also affects implementation of supply chain management practices to a great extent. Respondents further indicated with a mean of 3.6737 that budgetary allocation determines effective implementation of supply chain management practices to a great extent. commitments was also noted with mean of 3.5579 that determines supply chain management practices implementation to a great extent The respondents also indicated with a mean of 3.2105 that facilitation to perform duties determine implementation of the supply chain practices to moderate extent. Finally reducing conflicts has a moderate extent with mean of 3.1789 in determining effective implementation of supply chain management practices in international humanitarian organizations.

### 4.3.4 Information Sharing

The respondents had to indicate the extent at which information sharing affects supply chain management practices in humanitarian organization in Kenya. The responds are indicated in table 11.

**Table 11: Extent to which information sharing influences SCM**

| | Frequency | Percent |
|---|---|---|
| Little extent | 11 | 11.6 |
| Moderate extent | 21 | 22.1 |
| Great extent | 39 | 41.1 |
| Very great extent | 24 | 25.3 |
| **Total** | **95** | **100.0** |

The results on table 11 indicates 41.1% of the respondents indicated that information sharing affects effective implementation of supply chain practices to a great extent, 25.3% indicated very great extent. It was also indicated with 22.1% that information sharing affects effective implementation of supply chain practices to a moderate. 11.6% of the respondents indicated that information sharing affects implementation of supply chain practices to a little extent.

**Table 12: Extent aspects of information sharing affects implementation of SCM**

| | Mean | Std. Deviation |
|---|---|---|
| Regularly gathering feedback | 3.3684 | 1.25522 |
| Regular flow of information | 4.0947 | 1.04244 |
| Clear mutual expectations | 4.8105 | .65712 |
| Open door policy | 3.5579 | 1.32662 |
| Periodical talkfest (Meetings) | 3.1789 | 1.23752 |

The findings of respondents on table 12 indicated with mean 4.8105 that clear mutual expectations affects implementation of supply chain to a very great extent, it was indicated with mean of 4.0947 that regular flow of information influences effective implementation of supply chain management practices to a great extent. Respondents further indicated with a mean of 3.5579 that in open door policy affects implementation of supply chain management practices to a great extent. Regular gathering feedback was also noted with mean of 3.3684 that it affects supply chain management practices implementation to a moderate extent. The

respondents also indicated with a mean of 3.1789 that periodical talkfest (meetings) determine implementation of the supply chain practices to moderate extent.

### 4.3.5 Supply Chain Management Practices

The respondents were requested to indicate the trend of the following aspects of supply managements over the last five years. The findings are indicated in table 13.

**Table 13: Aspects of supply chain management practices**

| | Mean | Std. Deviation |
|---|---|---|
| Mature collaboration with customers and suppliers | 4.1684 | 1.00692 |
| Data-oriented forecasting | 3.9368 | 1.07990 |
| Appropriate levels of control | 3.5053 | 1.21929 |
| Risk minimization | 3.4421 | 1.31857 |
| Optimization of company inventory | 3.6316 | 1.07241 |
| Strategic sourcing | 3.5053 | 1.21054 |
| Technology adoption | 4.5053 | .88575 |

The findings on table 13 indicates that Technology adoption has greatly improved for last five years with a mean of 4.5053, mature collaboration with customers and suppliers has improved with mean of 4.1684, and data-oriented forecasting has improved for the last five years with a mean of 3.9368. It was indicated with a mean of 3.6316 that optimization of company inventory has also improved for last five years. Furthermore, strategic sourcing was indicated with mean of 3.5053 that has improved for last five years. Appropriate levels of control were indicated with mean of 3.5053 that has improved over last five years. Lastly, risk minimization was also indicated with mean of 3.4421 that has remained constant for last five years.

## 4.4 Regression Analysis

Regression analysis shows how dependent variable is influenced with independent variables. For example, the combined effect of all independent variables on the dependent variable.

**Table 14: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .323 | .104 | .064 | 6.16477 |

Table 4.12 is a model fit which establish how fit the model equation fits the data. The $R^2$ was used to establish the predictive power of the study model and it was found to be 0.104 implying that 10.4% of effective implementation of supply chain management practices is determined by the following variables; human capital, inventory management, management support and information sharing leaving 89.6% unexplained. Therefore, further studies should be done to establish the other factors (89.6%) that determine effective implementation of supply chain management practices in international humanitarian organization in Kenya.

**Table 15: ANOVA results**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 397.750 | 4 | 99.437 | 2.616 | .040 |
| | Residual | 3420.398 | 90 | 38.004 | | |
| | Total | 3818.147 | 94 | | | |

Table 15 shows the probability value of 0.040 indicating that the regression relationship was significant in determining how; human capital, inventory management, management support and information sharing influence effective implementation of supply chain management practices in humanitarian organization in Kenya. The F calculated at 5 percent level of significance was 2.616. Since F calculated is greater than the F critical (value = 2.470), this shows that the overall model was significant.

**Table 16: Coefficients of Determination**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 23.826 | 5.288 | | 4.506 | .000 |
| | Human capital efficiency | -.058 | .325 | -.029 | -.180 | .858 |
| | Inventory management | -1.145 | .430 | -.603 | -2.662 | .009 |
| | Management support | .296 | .406 | .158 | .729 | .468 |
| | Information sharing | .961 | .380 | .398 | 2.529 | .013 |

The established model for the study was:

$Y = 23.826 - 0.058X_1 – 1.145X_2 + 0.296X_3 + 0.961\ X_4$

The regression equation above on table 4.14 has established that taking all factors into account (human capital, inventory management, management support and information sharing) constant at zero effectiveness in implementation of S.C.M practices will be 23.826. The findings presented also show that taking all other independent variables at zero, a unit increase in the human capital efficiency would lead to a 0.058 decrease in the score of effective implementation of supply chain management practices. The findings also indicated that a unit increase in the scores inventory management would lead to a 1.145 decrease in the scores of implementation of supply chain management practices. Further, the findings shows that a unit increases in the scores of management support would lead to a 0.296 increase in the scores of supply chain management practices. The study also found that a unit increase in the scores of information sharing would lead to a 0.961 increase in the scores of effective implementation of supply chain management practices in international humanitarian organization in Kenya. The study deduced that Inventory management and Information sharing were significant ($p<0.05$) while human capital efficiency and management support were insignificant.

## 4.5 Regression Diagnostic tests

### 4.5.1 Sampling Adequacy Tests

**Table 17: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test**

| Scale | Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | Bartlett's Test of Sphericity | | |
|---|---|---|---|---|
| | | Approx. Chi-Square | df | Sig. |
| Human capital efficiency | .814 | 928.302 | 94 | .000 |
| Inventory Management | .779 | 74.437 | 94 | .000 |
| Information Sharing strategy | .852 | 429.893 | 94 | .000 |
| Executive/ Management support | .742 | 45.761 | 94 | .005 |

Table 17 above shows Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and Bartlett's test of sphericity. The test results show that the scales had values above the threshold of 0.5 as established by Williams, Brown and Onsman (2012). Williams, Brown and Onsman stated that KMO of 0.50 is acceptable degree for sampling adequacy with values above 0.5 being better.

Bartlett's Test of sphericity which analyzes if the samples are from populations with equal variances produced p-values less than .05 ($p < .001$). Since the Bartlett's test significances were less than 0.05 further indicates an acceptable degree of sampling adequacy (sample is factorable). Bartlett's test of sphericity had a consistent significance of $p < .001$ which depicted and confirmed sampling adequacy.

### 4.5.2 Multicollinearity Test

The VIF detects multi collinearity by measuring the degree to which the variance has been inflated. A VIF greater than10 is thought to signal harmful multi collinearity as suggested by Baum (2006).

**Table 18: Summary of Collinearity Statistics**

| Model | Collinearity Statistics | |
|---|---|---|
| | Tolerance | VIF |
| Human capital efficiency | 0.924 | 2.728 |
| Inventory Management | 0.786 | 1.423 |
| Information Sharing strategy | 0.634 | 1.352 |

| | | |
|---|---|---|
| Executive/ Management support | 0.742 | 3.253 |

The Variance inflation factor (VIF) was checked in all the analysis which is not a cause of concern according to Baum (2006) who indicated that a VIF greater than 10 is a cause of concern. The basic assumption is that the error terms for different observations are uncorrelated (lack of autocorrelation).

### 4.5.3 Homoscedasticity Test

**Table 19: Levene Statistic**

| Variables | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Human capital efficiency | 9.843 | 7 | 94 | .039 |
| Inventory Management | 4.532 | 7 | 94 | .043 |
| Information Sharing strategy | 8.440 | 7 | 94 | .016 |

Homoscedasticity assumes that the dependent variable(s) exhibit an equal level of variance across the range of predictor variable(s). Levene test was employed to assess the equality of variances for the four variables calculated (Human capital efficiency, Inventory Management, Information Sharing strategy and Executive/ Management support). If the Levene's Test is significant ($p \leq .05$), the two variances are significantly different. If the test is not significant ($p \geq .05$), the two variances are not significantly different; that is, the two variances are approximately equal; that is, the data groups have equal variances (Gastwirth*et al*., 2009). From the findings, the resulting P-value of Levene's test is less than the conventional 0.05 critical value, indicating that the obtained differences in sample variances are likely not to have occurred based on random sampling from a population with equal variances. Thus, there is significant difference between the variances in the population.

### 4.5.4 Normality test

**Table 20: Shapiro-Wilk Test**

| | Statistic | df | Sig. |
|---|---|---|---|
| Human capital efficiency | 0.887 | 94 | 0.012 |
| Inventory Management | 0.834 | 94 | 0.073 |

| | Statistic | df | Sig. |
|---|---|---|---|
| Information Sharing strategy | 0.924 | 94 | 0.027 |
| Executive/ Management support | 0.732 | 94 | 0.001 |

A Lilliefors Significance Correction

From the finding on the Shapiro-Wilk test on normality, the study found that significance was less than 0.05 which leads to the rejection of the null hypothesis that data on the three variables were not normally distributed.

### 4.5.6 Tests of Independence

Independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson test. Durbin Watson (DW) test check that the residuals of the models were not autocorrelated since independence of the residuals is one of the basic hypotheses of regression analysis. Its statistic ranges from zero to four. Scores between 1.5 and 2.5 indicate independent observations (Garson, 2012).

**Table 21: Durbin Watson Test**

| Variables | Durbin Watson |
|---|---|
| Human capital efficiency | 1.987 |
| Inventory Management | 2.084 |
| Information Sharing strategy | 2.231 |
| Executive/ Management support | 1.648 |

The DW statistics were close to the prescribed value of 2.0. Thus, it can be concluded that there was no autocorrelation and the residuals were independent.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter presented the discussion of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations drawn were focused on addressing the objective of the study.

## 5.2 Summary

The general objective of this study was to establish the determinants of effective implementation of supply chain management practices in international organizations in Kenya. The respondent rate of the study was 74% representing 95 respondents who filled and returned the questionnaires. Most respondents were male gender and were represented in the study with 55.8%. The research also revealed that most of respondents had an education level of bachelor's degree and had experience of above 5 years in the organization.

The study noted that employees skills determines effective implementation of supply chain management practices in humanitarian organization in Kenya to a great extent, employee abilities also influences effective implementation of supply chain management practices to a great extent. The findings further summarizes that professional competence determines effective implementation of supply chain management practices to a great extent. Research also established that intelligence moderately determines supply chain management practices implementation. On addition level of experience moderately determines implementation of the supply chain practices. Finally, results from analysis revealed that social competence determines effective implementation of supply chain management practices in international humanitarian organizations to a little extent. The study concur with Mistry (2014) who argued that internal training inclines to be centered on technical supply

chain and logistics development, interpersonal and people management skills (e.g., supervisory skills, negotiations, team building, coaching and leadership) and health and safety.

Research established that inventory management has great influence on implementation of supply chain management. Demand forecasting was recorded that it affects implementation of supply chain to a great extent. It was also noted that inventory valuation influences effective implementation of supply chain management practices to a great extent. Further study revealed that lead time determination determines effective implementation of supply chain management practices to a great extent. Inventory visibility was noted that it moderately determines supply chain management practices implementation. The study results also showed that inventory forecasting determines implementation of the supply chain practices to moderate extent. The findings were in agreement with Alverson (2003) who noted that by increasing the number of inventory turns, international organizations can hold less inventories leading to less capital invested at any given time.

Results from analysis also showed that management support has great effect in determining effective implementation of supply chain management practices. Furthermore, development and approval of proposal plan affects implementation of supply chain to a greatly. The study also noted that team building and budgetary allocation determines effective implementation of supply chain management practices to a great extent. Results of the findings also noted that commitments determines supply chain management practices implementation to a great extent study results also showed that facilitation to perform duties determine implementation of the supply chain practices to moderate extent. Finally, study findings noted that social reducing conflicts determines effective implementation of supply chain management practices in international humanitarian organizations to a moderate extent. The findings concur with Andebe (2013) which states that resource management is an

indispensable requirement to provide for an interactive training programme to aid organizations in achieving an operational excellence like employee development, infrastructure and work environment. The findings agree with McKone-Sweet et al (2005) who found that lack of executive support is a big a barrier to effective application of SCM practices.

Research further established that information sharing greatly determines the effective implementation of supply chain management practices in international humanitarian organization in Kenya. In relation to information sharing aspects clear mutual expectations has a very great effect on supply chain management implementation. The study also established that other aspects such as regular flow of information and open door policy affects implementation of supply chain management practices to a great extent. Research noted that regular gathering feedback affects supply chain management practices implementation in international humanitarian organization to a moderate extent. The research finally noted that periodical talkfest (meetings) determine implementation of the supply chain practices to moderate extent. Results for this section seem to be consistent with those who documented that information sharing is a barrier for implementation (Burns, 2012). The results also concur with Senge (2010) that successful implementation of information in the application of supply chain management practices has the effect of reducing levels of complexity. The result implies that information sharing affects effective implementation of supply chain management practices in international humanitarian organizations in Kenya to a great extent. Results for this section seem to be consistent (Jack, Powers & Skinner, 2010) that information sharing ideas and concepts act as catalysts towards effective application of supply chain management.

## 5.3 Conclusions

Based on the research findings the study concludes that human capital efficiency determines effective implementation of supply chain management practices in international humanitarian organization in Kenya. The study further concludes that employees' skills, professional competence, intelligence, social competence as well as level of experience greatly determines effective implementation of supply chain management practices in international humanitarian organizations in Kenya.

The study also concludes that inventory management determines effective implementation of supply chain management practices in international humanitarian organizations in Kenya. Research concludes that the following aspects of inventory management such as demand forecasting, lead time determination, inventory valuation, inventory visibility and inventory forecasting affects effective implementation of supply chain management practices in international humanitarian organization in Kenya.

The research further concludes that management support determines effective implementation of supply chain management practices in international humanitarian organizations in Kenya. Development and approval of proposal plan have a great influence in determining effective implementation of supply chain management practices. Budgetary allocation, commitments, facilitation to perform duties and social conflicts reducing moderately determines effective implementation of supply chain management practices.

The research finally concludes that information sharing plays a big role in determining effective implementation of supply chain management practices in international humanitarian organization in Kenya. An aspect of clear mutual expectations greatly affects effective implementation of supply chain management organization in the organizations. The study also concludes that other aspects such as regular flow of information, open door policy,

periodical talkfest (meetings) and regular gathering of feedback have a moderate influence on effective implementation of supply chain management practices.

### 5.4 Recommendations

To enhance effective implementation of supply chain management practices in international humanitarian organization in Kenya, the study makes the following suggestions;

The study recommends that in order to improve on the level of human capital efficiency in the organisation which leads to effective implementation of supply chain management practices the managers of humanitarian organisations should recruit and continuously train supply chain management staff on how to improve on the efficiency of supply chain management. The managers should also recruit competent staff with Knowledge and Skills on SCM and the recruitment process should be based on professional qualifications and experience in supply chain management functions.

The study also recommends that managers in humanitarian organisation should ensure that inventory is properly managed, qualified employees with proper skills should be hired to manage inventory. The managers of humanitarian organization should always take into consideration aspects such as demand forecasting, lead time determination, inventory valuation, inventory visibility and inventory forecasting in determining effective implementation of supply chain management practices in the organization.

To improve on management support, the study recommends that supply chain managers in humanitarian organisations should develop proposal plan which should be approved by the employees. The plan will aid in managing the implementation of supply chain effectively. Managers of humanitarian organisations should ensure that budget is well allocated in every department in the organisation. Lastly the employees in-charge of supply chain implementation should be well facilitated to ensure they are committed and effective in their duty.

Lastly the study recommends that the managers of humanitarian organisations should ensure that there is regular flow of information in the organisation. The managers should come up with procedure of how the information should flow from top to all employees in the organisation. The managers of humanitarian organisation are further advised to be holding meeting with regularly with supply chain officers in order to access on performance of supply chain management practices. In those meetings challenges that faces the effective implementation of supply chain management practices has to be discussed and remedies to overcome them suggested.

**5.5 Recommendations for Future Research**

Humanitarian organizations should investigate the potential benefits that can come from IT-enabled SCM, such as barcode technology, enterprise resource planning (ERP) and Radio-frequency identification (RFID) that could improve supply chain efficiency by supporting supply replenishment and reduce operating cost.

The role of top management in building supply chains in international humanitarian organisation, effectiveness of information sharing in supply chains should also be considered as an area of future study.

From the above findings, conclusion and recommendation the study recommends that an in-depth study should be carried to determine the challenges faced by international humanitarian organizations in determining effective implementation of supply chain management practices.

The study recommends another study should be done to investigate effects of determinants of effective implementation of supply chain management practices by other organizations rather than the humanitarian organizations. Examples of such organizations are like supermarkets.

Since there is 89.6% error term, other studies should work at other factors not tackled by the study. The study can be done by focusing on different variables not tackled in this study.

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## APPENDICES

### Appendix I: Humanitarian Organizations in Nairobi, Kenya

1. ACF-Nutrition
2. APHRC-Health
3. AVSI Foundation AVSI -Education
4. Concern-Wash
5. Film Aid-Education
6. FtC – Food security& Livelihood
7. GOAL-Education
8. HelpAge - Governance
9. IOM – Shelter & NFI
10. IRC - Shelter & NFI
11. KRCS – Emergency response
12. MSF - Health
13. NRC -Wash
14. SC - Protection
15. SP – Emergency response
16. TC(Trocaire) - Protection
17. UNHCR – Shelter & NFI
18. UNICEF – Governance
19. WFO – Food & Livelihood
20. WV-Governance
21. AAH - Nutrition

**Source: Relief web (2016)**

**Appendix II: Research Questionnaire**

**Dear Respondent**

This questionnaire is designed to assist the researcher to make an objective assessment of the determinants of effective implementation of supply chain management practices in international humanitarian organizations in Kenya. The exercise is basically academic and your answers will be treated with the utmost confidentiality they deserve. Your maximum co-operation is highly anticipated. Please tick (√) the response applicable to you.

**SECTION I: DEMOGRAPHIC INFORMATION**

**Instructions**

You are requested to fill out your personal information in the spaces below. Please tick only one response.

1. Gender.

   Male ☐ .Female ☐

2. State your experience in the organisation

   a) 0-5 years ☐ b) ☐10 years

   c) 11-15 years ☐ d) ☐ 16-24 years

3. State your education level.

   a).Diploma ☐ b)1st degree ☐

   c) Masters degree ☐ d) PhD ☐

**SECTION 2: Determinants Of Effective Implementation of Supply Chain Management Practices**

**Human capital efficiency**

1) In your view, what is the role of human capital efficiency on effective implementation of supply chain management practices in international organizations in Kenya?

……

……

……

2) To what extent does human capital efficiency affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ] To no extent [ ]

3) To what extent do the following aspects of human capital efficiency affect implementation of supply chain management practices in your organization?

| | **Very great extent** | **Great extent** | **Moderate extent** | **Little extent** | **Not at all** |
|---|---|---|---|---|---|
| Professional competence | | | | | |
| Employee skills | | | | | |
| Social competence | | | | | |
| Level of Experience | | | | | |
| Intelligence | | | | | |
| Employee Abilities | | | | | |

**Inventory Management**

4) To what extent does inventory management affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ] To no extent [ ]

5) To what extent do the following aspects of inventory management affect implementation of supply chain management practices in your organization?

| | **Very great extent** | **Great extent** | **Moderate extent** | **Little extent** | **Not at all** |
|---|---|---|---|---|---|
| Inventory valuation | | | | | |
| Inventory visibility | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Lead time determination | | | | | |
| Inventory forecasting | | | | | |
| Demand forecasting | | | | | |

6) In what way do the above aspects of inventory management affect implementation of supply chain management practices in your organization?

……

……

……..

**Executive/ Management support**

7) To what extent do of executive/ management support affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ] To no extent [ ]

**8) To what extent do the following aspects of executive/ management support affect implementation of supply chain management practices in your organization?**

| | **Very great extent** | **Great extent** | **Moderate extent** | **Little extent** | **Not at all** |
|---|---|---|---|---|---|
| Team building | | | | | |
| Budgetary allocation | | | | | |
| Facilitation to perform duties | | | | | |
| Commitment | | | | | |
| Reducing conflicts | | | | | |
| Development and approval of proposal plan | | | | | |

9) How do the above aspects of executive/ management support affect implementation of supply chain management practices in your organization?

……

……

……

……

**Information Sharing/ Communication strategy**

10) To what extent does information sharing/ communication strategy affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ] To no extent [ ]

11) To what extent do the following aspects of information sharing/ communication strategy affect implementation of supply chain management practices in your organization?

| | **Very great extent** | **Great extent** | **Moderate extent** | **Little extent** | **Not at all** |
|---|---|---|---|---|---|
| Regularly gathering feedback | | | | | |
| Regular flow of information | | | | | |
| Clear mutual expectations | | | | | |
| Open door policy | | | | | |
| Periodical talkfest (Meetings) | | | | | |

**Effective Implementation of Supply Chain Management Practices**

12) What is the trend of the following in your business for the last five years?

| | **Greatly Improved** | **Improved** | **Constant** | **Decreasing** | **Greatly decreased** |
|---|---|---|---|---|---|
| Mature collaboration with customers and suppliers | | | | | |
| Data-oriented forecasting | | | | | |
| Appropriate levels of control | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Risk minimization | | | | | |
| Optimization of company inventory | | | | | |
| Strategic sourcing | | | | | |
| Technology adoption | | | | | |

13) How can the effectiveness of implementation of supply chain management practices in international organizations in Kenya be improved?

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**END**

**THANK YOU**