

**SUPPLY CHAIN MANAGEMENT PRACTICES AND PERFORMANCE OF  
RELIEF HUMANITARIAN ORGANIZATIONS IN KENYA**

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**DECLARATION**

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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This research proposal has been submitted for examination with our approval as the university supervisors.

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## **DEDICATION**

This project is devoted to my family who endured at my side and braced me during the course of this journey, forfeiting the whole lot ever since the flinch of this voyage.

## **ACKNOWLEDGEMENT**

I wish to distinguish my heartfelt gratefulness to my supervisors Mrs. Nancy Marika and Mr. Ernest Akello for their commitment, guidance and special attention in the development of this study.

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## **LIST OF ABBREVIATIONS**

<b>SCOR:</b>	Supply chain operations services
<b>SC:</b>	Supply Chain
<b>SCM:</b>	Supply Chain Management
<b>UNHCR:</b>	United Nations High Commissioner for Refugees
<b>PLS:</b>	Party Logistics Services

## **ABSTRACT**

This study embraced descriptive plan and mainly grounded on purposes of determining the extent to which supply chain management practices ought to be applied amid relief humanitarian firms in Kenya, secondly to ascertain the affiliation between study variables and SC performance of relief humanitarian organizations in Kenya as well as the challenges which prevent the said firms from fully embracing supply chain practices as part of their daily operations. Due to the minimal no of relief firms in Kenya, the researcher decided to do a census study of all population which was 40 firms. The researcher distributed 40 questionnaires and each firm was issued with one questionnaire to provide the data sought by the researcher. After data collection process was complete, researcher found out that out of the possible 40 respondents, 27 questionnaires was correctly filled and was therefore used for analysis in this study. The study findings was presented by researcher through use of descriptive statistics to enable the beneficiaries easily interpret the findings. This was through use measures of central tendency and dispersion such as frequency tables, means and standard deviations to aid in interpretation and understanding. The discoveries showed practices embraced to a great extent by relief humanitarian firms in Kenya with customer integration, supplier integration and outsourcing respectively being with utmost means hence it was concluded that they need to be fully embraced to realize the benefits of study variables or practices. The outcomes of the study pointed out positive connections between supply chain management practices and supply chain performance hence it was recommended that such firms entrusted with aiding during disaster occurrence should strive further to embrace said practices for their own benefit such as reducing response time, enhancing flexibility and effectiveness as well as remaining competitive in the current turbulent environment. The study further found that relief humanitarian firms face numerous barriers as they try to embrace study variables to moderate extent. The most faced challenge was greater cost of embracement as well as lack of support and assurance from management and board members. The research concluded that relief firms in Kenya need to embrace supply chain management practices and ensure that top management support their strategic plans to ensure sufficient funds are allocated for implementation of SC management practices. There is also need to train and familiarize employees at their respective firms to conceptualize the benefits associated with supply chain management practices.

## **CHAPTER ONE: INTRODUCTION**

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

Kenya experiences a number of natural and manmade disasters, including floods, droughts, landslides, wild fires and the intercommunity war (Maspero and Ittmann (2008).Therefore supply chain management practices is the serious concern for many relief humanitarian organizations operating in Kenya in their efforts trying to ensure efficiency and effectiveness in responding disasters. SCM practices provide services that are critical and transform the inputs to outputs for grate performance. For that reason since relief humanitarian organizations operate in quite uncertain environment where the disasters can occur at any time and place (Edgeman, Dahlgaard, & Scherer, 1999), it's imperative that relief humanitarian organizations continuously examine the Kenyan surroundings to respond and adjust not only to varying disastrous anxieties but also to needs of the affected persons and their ever-present potential of supply chain disruptions. Under such an environment, organizations will need to be able to react to changes in its environment in conjunction with its key suppliers and customers (Wagner & Silveira-Camargos, 2011).

Effective Supply chain management practices in humanitarian organizations is a strategic and a cost saving tool in the delivery of relief through enhanced planning operative competence ,distribution and supply of relief properties. Humanitarian organizations in Kenya at large has experienced funding challenges in the last decade from the economic depression in the Western Countries who are the major donors to the Kenyan relief humanitarian firms, to a more recent change in leadership in America that has tended to look inwards in its funding and consequently scaling down funding to Africa projects (Lee ,2014).Hence, Kenyan relief humanitarian organizations should be responsive, competent, and flexible and act quickly to the environment demands (Rodman, 2014).

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

These represent set of processes or actions performed in a firm to enhance efficiency and effective managing of overall supply chain (Tomi Solakivi, 2014). This study borrows on supply chain practices which relate directly to humanitarian supply chain performance including: supply chain outsourcing, customer supplier relationships; information sharing and strategic supplier relationships and agility.

Spina *et al.* (2015) identified a number of supply chain practices alliances, planning of demand and supply factors, Inventory management, distribution of production, optimization of transportation among others and conducted a research on what effects they have in regards to SCM performance. This current research aims at examining how; outsourcing, strategic supplier partnerships, information sharing, and customer supplier relationships as the main practices in the supply chain boost supply chain performance in humanitarian organizations in Kenya. SCM is known as one of the greatest operative methods for humanitarian organizations to progress their supply chain performance and can be seen as a theory grounded on the trust that every institution unswervingly and incidentally touches the enactment of all extra supply chain associates, additionally inclusive supply chain performance (Cooper *et al.*, 2010).

### **1.1.2 Supply Chain Performance**

Zhang and Okoroafo (2015) define Supply chain performance as the organizations ability to lower cost of logistics by ensuring they deliver correct output to the correct places and most importantly at the correct timeline. Vogel (2011) argue that procurement performance is highly influenced by macro factors. It is on this basis that firms have shifted from individual organizational performance to procurement and supply chain performance in order to enhance bottom line performance within the whole chain. Supply Chain performance is incidental to proficiency and efficacy of Supply Chains in delivering of services to the end user. According to Lee and Billington (2012), discrete sites in any Supply Chain are failure to increase efficiency and effectiveness if they pursue goals independently. In this respect, performance models and studies ought to be formulated for business goals and also the achievement of these goals to be measured to allow for easy access of the effectiveness of the techniques or strategies used (Lee and Billington, 2012).

Several measures have been formulated to gauge supply chain activities and the determination of the appropriate type of gauge is not easy since focusing on one aspect such as cost reduction may improve cost effectiveness at the expense of the performance of the entire supply chain system (Arrowsmith, 2013) among others like responsiveness, flexibility, reliability and customer satisfaction. Due to this, more realistic supply chain model including Supply Chain Operations Reference (SCOR) need to be developed which leads to superior measurement of supply chain performance. The SCOR is perceived as a balanced system of performance measurement since it covers five important processes of the supply chain namely; planning; sourcing; making; delivering; and returning (Supply Chain Council, 2015)

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

Kenya is exposed to a variety of natural and man-made disasters which include; disease outbreaks, food insecurity, floods, terrorism, drought, conflict, wars and road accidents. In recent years natural disasters such as flooding and drought have increased infrequency, intensity and duration as a result of climate change and environmental degradation. The shelter/NFI cluster estimates that 160,000 persons could be displaced in the near future due to natural and man-made disasters (IOM Humanitarian compendium, 2014).

Relief firms include multinational agencies such as United Nations, Action against Hunger, Worldwide Federations of Red cross and Red Crescent Society, which are supported by voluntary contributions by the national and international Governments and Non-Governmental Organizations in form of cash and any other kind of assistance with the aim of helping the affected persons who are need. Two major principles guide operations of humanitarian organizations from Standards and the first outlines that persons who have been affected by disaster or conflict have a right for assistance, and number two is that all the necessary steps should be employed so as to prevent or reduce suffering of human beings (The sphere, 2011).

Supply chain plays an essential role in providing relief to disaster victims and it encompasses planning and managing of all the undertakings involved with obtaining, logistics as well as procurement. Coordination and collaboration with other stakeholders such as suppliers, intermediaries, donors, beneficiaries as well as third party service providers is also inclusive (CSCMP, 2011). The involved parties in humanitarian supply chain are required to interact efficiently as well as effectively while offering their services so that the beneficiary and donor find value in the result.

## **1.2 Research Problem**

supply chains management practices has the responsibility of ensuring that goods and services get to where they are required within the shortest time in order to save lives to achieve high scale of performance. Many a time the opposite of the above happens since it takes unusually long to take humanitarian aid to some places. Therefore research of SCM practices in the humanitarian organizations and their impact on supply chain performance is hence a concept of importance to this study for the research will study on supply chain management in detail together with the practices for example distribution of facts, activity outsourcing, developing relationships between customer and supplier, strategic partnering with supplier and agility to bring about cost reduction, efficiency and effectiveness, process standardization and collaboration which will translate to higher organization flexibility and reliability in addition to being responsive and timely in service delivery. (Wagner & Camargos, 2011)

Humanitarian supply chain management is a comparatively fresh area and has attracted few researchers in the last five years. Masspero and Ittmann (2010) in their argument as they discuss the rise of humanitarian supply chains indicate that the area is of contemporary and has attracted few researchers in the last five years.

Tan *et al.* (1998) adopted procurement, value, and client associations to signify supply chain management practices. He also identified some characteristics of practices in supply chain management by utilizing element exploration: incorporation of the supply chain, information distribution, features of supply chains, managing of the client service, proximity in terms of geographical location and just in-time (JIT) capability. According to

Li, *et al.*, (2004) SCM practices involve multi-faceted concept which involves strategic supplier partnerships, customer relationship, extensive information sharing and quality of the shared information and postponement. Richard and Gray (2009) did a research about customer service as practiced in emergency relief chains and concluded that understanding of various perspectives of the customer offers a preliminary argument in the developments of crisis relief networks. However the study only focused on the customer in providing an understanding of designing and implementing effective supply chain.

Benita (2010) concluded that measurement of performance for relief chain is very important in especially when an organization wants to secure donor funds (accountability) and successfully carrying out relief mission (saving lives and reduction of human suffering); however the study was based only on organizational performance of humanitarian organizations. Locally, Nyamwange and Nyaguthie (2004) carried out a study on logistics challenges facing humanitarian aid organizations focusing on lessons learnt from Somalia. The duo concluded that humanitarian supply chains are faced by many challenges such as extraordinary ambiguity in demand, quantifying the success of humanitarian operations, deficiency of investment in machinery and poor information integration. In addition Muchiri (2012) on his study on factors affecting effectiveness of humanitarian aid in Somalia found that security, cultural, political and coordination factors have influenced the effectiveness of humanitarian aid in Somalia, however the study was based on only those four factors and was limited to Somalia. Lastly Ndambuki (2013) concluded that the incorporation of supply chains has proven critical to success for a company's supply chain and performance; however the study was limited to international humanitarian organization operating in Kenya.

Early scholars have deliberated ways in which the performances of the supply chains have been impacted by the supply chain management practices, though none of the studies has concentrated on addressing the existing interconnection amongst supply chain management practices and their weight on Supply chain performance of Humanitarian organizations in Kenya (Lee 2014). And therefore this research will institute impacts of supply chain management practices on supply chain performance among humanitarian

organizations in Kenya by providing answers to key questions as indicated: To what extent is the enactment of supply chain management practices at Kenyan humanitarian organizations? What are the bearings of supply chain management practices on the supply chain performance of humanitarian organizations in Kenya? The encounters faced by humanitarian organizations in effecting practice in supply chain management?

### **1.3 Objectives of the Study**

The purposes of this study are:

- i.** To establish the supply chain management practices that have been implemented by humanitarian organizations operating in Kenya.
- ii.** To conclude impact of supply chain management practices on the supply chain performance of humanitarian organizations operating in Kenya.
- iii.** To determine the challenges experienced by humanitarian organizations in their efforts to implement SCM practices.

### **1.4 Value of the study**

The study is of significance both to government and non-governmental organizations in Kenya in formulating policies and programs which is aimed towards supply chain management practices in humanitarian organizations. When implemented, such policies facilitate the improvement of disaster response time and relief by humanitarian organizations. These institutions benefited from the improved organizational and performance of supply chain as well as sustainability of operative practices in their value chain activities including shortened lead-time, quality observance in the delivery process, and sustainable supply of goods and relief to the affected persons.

The findings of this research is considered beneficial to those organizations that are planning to start their operations in the humanitarian sector since they will know beforehand the supply chain management encounters they will meet. The discoveries of will be worthwhile to donors, policy creators and humanitarian organizations. The study is also expected to enable humanitarian organizations to advance on administration of their supply chain practices and evaluate their performance in order to achieve efficiency,



reliability and cost reduction in their supply chains when addressing various disasters. The findings of this study will enable humanitarian organizations operating in Kenya to have a clear knowledge relating to Supply Chain management practices and incorporate them in the management of their respective supply chains for higher performance.

Scholars in the zone of humanitarian Supply chains management will also be able to find this research appealing since it can be a source of reference for their studies.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This segment entails previous writings on the practices that have been utilized and how these practices influence on performance of the supply chain in humanitarian organizations in Kenya. Review of literature, which encompasses the broad outline of SCM practices, conceptual framework and supply chain performance, provides the foundation of this research. Additionally, summary of conceptual framework illustrates the existing connection between SCM practices and supply chain performances.

### **2.2 Theoretical Literature Review**

This section is aimed at exploring and exposing accessible concepts, principles, and findings of different research works as well as generalizations that relate to this study. Gaps that motivated the evolving of the current problems is also discussed (Sarkis, 2011).

#### **2.2.1 Transaction Cost Theory**

This theory is a crucial concept in the ground of strategy (Stephen & Helen, 2011) and it was developed by Oliver Williamson who was an economist. This model answers queries about why manufacturing entities exist (i.e., to minimize logistics costs), how entities describe their borders, and how they should to administer processes. Based on Lozano and Valles (2013), TCE was initially established to aid regulate the proficiency in manufacturing goods and at lower charge to guarantee low prices to clients (Sirmon, Hitt& Ireland, 2007).

Humanitarian firms have to offer correct quality of goods to affected persons and reward to the bidder posing the lowest price. In logistic management, Transaction cost economics theory will apply in manufacturing logistics total cost ownership concept which includes the purchase cost, maintenance cost, warehousing cost, transportation cost, service cost and processing cost. Humanitarian firms will incur this cost by shipment of materials from upstream level to the final customer and therefore logistics manager must carefully evaluate the tradeoff between these costs because all these will either increase or reduce logistics cost. Also there is need to coordinate all the activities involved in getting the

product to the firm so as to ensure that the integrated effort of logistics is achieved. This theory is very crucial in managing humanitarian logistics organizations especially the cost associated with logistics operations because it affects the level of customer satisfaction and may even change customer perceptions and loyalty to the firm (Walker and Brammer, 2009)

### **2.2.2 Resource Dependency Theory**

This theory was engineered in the year 1978 by Pfeffer and Salancik with the purpose of enlightening exactly how peripheral resources were used in transformation process and how delivery of merchandises affected operations of an organization. Theory main discussion was that institutions and firms relied upon resources whose origin was the environment that comprised many different organizations. The major hypothesis of this theory is to confirm whether or not organizations sustained their survival by minimizing any uncertain circumstances, dependence and categorizing firms as open systems that are reliant on contingencies in the external environment (Pfeffer & Salancik, 1978).

Even so, these environmental uncertainties or dependencies can be minimized by managers of the supply chain through implementation of several measures, whereby the concept of power is considered to be the essential stage. These measures can include, as presented by Hillman *et al.*, (2009), consideration for mergers and also acquisitions, partnerships, constituting and organizing the board, and successions or taking over of executives as juxtaposed actions. Additionally, firms can exploit their partnerships with their customer/supplier's, abilities as well as profit (Slowinsket *al.*, 2009).

Grounded on perception that supply peripheral and market atmosphere is naturally unbalanced, existing literary arguments indicate that the theory of resource dependency provides a blueprint on ways in which a company's and supply chain activities can reduce the unlikelihood which leads to supply market that is more stable (Handfield,1993). The assumption of the resource dependency theory is that there is a connection between buyers and sellers in a network stimulated by the resource dependence as well as the

interrelationships that have been stimulated by exchange of possessed resources as well as building of new resources as well as opportunities (Sanderson *et al.*, 2015).

Outsourcing as a practice is also supported by this theory to be one of the practices discussed in this study. Given that organizations differ in terms of competencies that they possess, they are therefore able to gain access to other resources that they need but don't possess through outsourcing (Vincent & Delke 2015).

### **2.3 Supply Chain Management Practices**

Ellram and Cooper (2003) defined supply chain management concept as incorporating idea of handling and management of materials and flow of information from upstream side through the transforming entity to the downstream cross of supply chain. According to Li *et al.*, (2006), SCM practices represented set of actions that an organization performs so as to ensure operational management of the supply chain. Unified supply chain management involves all-inclusive movement of processes that are required to enable value provision to both external client as well as the management in a horizontal way (Monczka & Morgan 1997).

The employment of practices that are effective in the supply chain facilitates the competition among organizations in the provision of leadership and also management to the fully integrated supply chain where there is inclusion of the external customer as well as prime suppliers and their suppliers. Contributions from Mentzer *et al.*, (2001) point out supply chain to be a group of firms as well as individuals who are involved in material and information movement from production point referred to as upstream to consumers' consumption point. With these set of supply chain activities, organizations are thus able to ensure that an effective supply chain management is promoted whereas attainment of an economical superiority is realized (Tomi & Solakivi, 2014). The research will be discussing five scopes of practices that can potentially have an effect the supply chain performance of humanitarian organizations in Kenya. These dimensions include, outsourcing in the supply chain, strategic supplier partnership, Relationships between customers and supplier, sharing of information and also agility.

### **2.3.1 Information Sharing**

Refers to members providing or availing data that is considered strategic and tactical willingly to others that may need it. The information could be about levels of inventory needed or available, forecasts on market conditions, and marketing strategies, and sharing this information openly reduces blind spots or uncertainties between stakeholders and aides in bettering performance (Salcedo & Grackin) 2010. The shared information may take a strategic or tactic nature, may be about activities dealing with logistics, may provide critical insights on clients and market, may cover on product availability and also inventory levels and even product discoveries and requirements on production (Huang & Lau, (2003)

Findings on preceding studies shows that organizational performance and efficiency are positively impacted when supply chain associates share information amongst themselves. Organizations get the advantage of making decisions on options that are superior as compared to competitors in regards to ordering, manufacturing and capacity allocations, as well as material planning, owing to superior discernibility of levels of demand, supplies and inventory available(Barratt ,2004).

Due to upsurge of level of rivalry in the marketplace, it is of great significance to many organizations the swiftness of sharing of information around the supply chain as well as the precision of this information, as it is an important success factor. Companies choose to invest in current software which has multiple functionalities like monitoring inventory, ability to trigger orders, shipment tracking capability, provide up to date data on availability of products as well as aiding companies to participate in joint planning (Lysons & Farrington, 2006).

Sanders (2010) contended that there is leveraging power on the performance of an organization when supply chain partners share information. This originates from the elimination of probable irregularity of the information that has been shared therefore resulting to the realization of a consistent platform information sharing. The firm is therefore saved from conducting corrective and preventive actions due to the abridged inconsistencies in the information that has been shared regarding all categories of supply

chain operations. These actions only serve to pay off poor information exchange amongst partners Childhouse and Towill (2003) identified in their study that a flow of materials from upstream all the way to the downstream that is simplified as well as reorganization and availing all flow of information all through the chain is an effort to build a supply chain that is effective, efficient as well as highly integrated. New possibilities to facilitate improvement of firm performance have been created by the information technology most especially if the relevant data can be shared with partners that were intended.

Regarding challenges of information sharing, Fawcett and Magnan (2008) revealed several among them privacy or sensitivity of the information shared, matters to do with payments, constancy and cost of information technology, rules that deal with antitrust, the inflexibility and accuracy of the information that has been shared, and lastly the development and expansion of dynamic capabilities that enables companies take advantage of the information that has been shared in a manner that is constructive to the users of the information.

### **2.3.2 Customer Integration**

Customer integration entails the development of favorable long range connections amongst firm and clients or dealers with the motive of enhancing the performance of the firm, as well as facilitating prompt conveyance of goods and services to clients. Scholarly works covering the relationships between customers and suppliers are rooted on some advanced frameworks like transaction cost and also resource dependency theories (Fynes& Voss 2002).

In firms that specialize with production, enhancement of strategic alliances amongst clients and vendors enables growth of good relationships which assist in performance growth and also achieving a competitive advantage through improvement of cost effectiveness, quality improvement and creation of a competitive advantage. The adoption if customer Relationship management has resulted to outstanding delivery of prompt consumer's services through personalized interactions with individual clients achieved through the effective adoption of distinct account information for individual clients (Kotler, 2003).

Fear on and Johnson (2006) pointed out that majority of clients and suppliers appreciate the fact that steady and lasting relationships have benefits among them being cost reduction, value appreciation, turn-around time and other indicators of performance and consequently concerted buyer-seller relations results to joint gains and input of rewards, commitment to the best quality, defect free products and adoption of design provisions that can be competently achieved by the process.

The major challenge in supply chain today, as explained by Beth *et al.*, (2003) entails the ability to build relationships that are sustainable. Beth also emphasizes on SCM not just being about software and systems, but encompasses the prevailing relationships that exist between clients and suppliers. With the growth and dynamics of technology and the market, more talent is on demand to rejuvenate the system.

Barratt (2004) identified that for organizations to be able to achieve a flawless flow of resources, cut costs of operation and deliver on time, they need to develop meaningful and close supplier relationships. Moreover a good supplier-client relationships ensures good relations, better information sharing and better integration processes. These positive results are attained when information exchange is reliable as well as flexible between the parties that are involved in the relationship (Li *et al.*, 2010)

### **2.3.3 Supplier Integration**

Refers to relationship structured and long term connecting firms and their suppliers. This relationship purposes to enable firms control planned and operational capabilities in order for them to realize benefits that are consistent by emphasizing interactions that are direct and long-term and most importantly inspire shared planning and efforts towards solving problem that arise (Li *et al.*, 2006).

The philosophy of associating discusses a multiplicity of interactions that are collaborative in function. Three forms of partnering exists first is having very limited interactions, second form is where firms view the relationship in the long term, and third form is where firms share significant combinations both operational and also strategic. Strategic partnerships run habitually for the long term and they encourage unanimous planning and problem solving (Lambert and Gardner, 1996)

The functions strategic partnership works in enhancing the unanimous benefits as well as encouraging continuous involvement in important areas of the organization for example employment of technologies, management of materials, and client's satisfaction. These partnerships go a long way to assist firms in achieving success in their trading with limited suppliers that show that they are willing and ready to go an extra mile and ensure products are a success. When these suppliers are allowed to take part in early stages of the process of product design, organizations are thus able to get more insights and various design options that are cost effective, choose superlative elements and machineries, and support in assessing the available designs (Tan *et al.*, 2002).

As noted by Mbutia and Rotich (2014), organizations that are aligned strategically have a close working connection with suppliers and this empowers them avoid the waste of time and effort during material and products transfer process between different levels i.e. from the upstream level to downstream levels in the supply chain. As per Noble (1997), a supplier partnership that is effective can be a substantial factor of a functional and superior supply chain.

Firms which consider supplier partnerships as well as timely engagements with vendors in the product improvement, supplier appraisals and evaluation are capable of lessening risks in the supply chain and better the performance of their suppliers, while still safeguarding their commitment to high standards of quality and timely delivery, (Lysons & Farrington, 2006).

#### **2.3.4 Postponement**

Postponement is well-defined as action of pushing ahead some activities associated with production for instance production, procurement and distribution to other dates when sufficient information pertaining customer would have been attained within supply chain network. Dual main deliberations in mounting rescheduling plan are making decisions on the number of steps to delay how and stages to reschedule. Postponements need to equal product types, firm markets demand and arrangements or restrictions surrounding production and logistic systems (Rogers and Charvet, 2012). This practice can also be described as institutional concept which part of operations in supply chain not being



transformed till orders from customers collected and acknowledged differing to manufacturing in expectation of forthcoming preparations. Venkatesh and Swaminathan (2002) pointed out that the theory of adjournment is to defer idea of obligation of work in progress inventories into a specific end creation and, thus, gaining control in regard to resourceful machine application in a vigorous undefined settings. Deferral is also denoted to arise of route arrangement, late point variation, or deferred products differentiations (Lee, 1993).

### **2.3.5 Outsourcing**

Outsourcing is explained to be a management strategy whereby service providers are assigned activities that are not considered to be core to the organization, so that the organization can concentrate in performing its core business activities. These service providers are usually more specialized, effective and more efficient in performing these outsourced activities. The history of outsourcing activities spans centuries back with the earliest being tax collection outsourcing in the Roman Empire recorded in the prehistoric Roman Empire (Kakabadse & Kakabadse, 2002).

The decision to outsource has an effect on the overall costs of running operations in a firm thus it is very critical. The decision assists organizations to draw borders that its operation will cover and thus enabling them to internally engage in undertakings that they consider to be part of their central undertakings, while activities that are considered non- critical are outsourced (Monczka *et al.*, 2010). Lacity and Hirschem (1995) argued out instances where outsourcing might not perform well to be when a firm needs distinctive information or when there is customization of services or in instances where employee's ranks are divided. The five key drivers of outsourcing include Finance, collaboration, quality, core business and cost (Beulen *et al.*, 1994).

A number of key reasons were pointed as to why firms may consider outsourcing. These include; firms concentrating their resources to mainly carry out their principal business activity, helping companies to analyze their plans regarding their income, Increase efficiency through reduction of costs, refining their employees' benefit plan by providing

and making available consistent information so as to maintain cost reduction over an extensive period (McCarthy ,1996).

Reid (1996) outlined the phases that organizations need to follow in their efforts to embrace outsourcing, the first being putting together a management team to plan, monitor, as well as oversee the process of transitioning to outsourcing. This is preceded by the identification and engagement of a team of experts so as to provide guidance to the team from the organization with specialization during the process making outsourcing decision, selecting, and contract processing. The benefits of outsourcing according to Fill and Visser (2000) includes enhancing firms to press forward aggressive pressures, attaining high quality products and efficiency, increasing accessibility of highly reliable knowledge that is functional, and finally multiplying efforts required to create relationships that are tactical while at the same time reducing managerial troubles internally.

#### **2.4 Supply Chain Performance**

It is vital to emphasize on sections performing poorly or those associated with general supply chain plan (US Agency for international development, 2010). Due to shifting dynamics in the current environment, there has been a shift in the frontline from performance of specific firms to supply chain Performance. Kluwer, (2004), defined the supply chain performance to be the degree to which happenings in the supply chain meet requirements or needs of end-customer, including availability of products, deliveries made on time, as well as all essential inventories and capabilities in the supply chain to deliver that performance in a responsively.

Measures of performances in the supply chain are precarious for maximizing value in the supply chain and upholding oversight. Therefore Humanitarian supply chain performance is measure in the delivery aspects of, reliability, flexibility, cost, customer satisfaction and responsiveness. The supply chain performances metrics facilitate organizations to benchmark thus evaluate performance both internally and externally run comparisons with other firms. Applying these performance metrics internally and externally ensures that non-value adding activities are eliminated, order variations are reduced, product flows are

faster, time, materials and human resources are utilized more efficiently, and the bullwhip effect is reduced (Frohlich & Westbrook, 2001).

#### **2.4.1 Supply chain Efficiency**

Supply chain represent that section of firm networks associated with sourcing of inputs, transporting them to the firm for value addition processes and finally delivering the final output or product to customers point of collection hence it is very important for every firm to ensure there is greater efficiency in their supply chain if in any case they want to remain competitive and still serve their customers. It is vital to understand that most scholars use supply chain efficiency as one of the performance indicators which is used in most cases to measure performance of a firm specifically supply chain performance (Hertz 2001) .

Organizational competence is commonly described as an inner standard of performance and result from the actions of a firm which focuses on following the correct process when production their outputs and from reserve necessity standpoint efficacy is a self-governing measure for appraising firm productivity. Outputs manufactured per capitals consumed must be equivalent 100 % all-encompassing fatalities. Efficiency understood in this formulation is a decent ration of close system outputs, such as a firm from an engine-administrative outlook when manufactured outputs are equal to profits (Pfeffer and Salancik 1978)

Though, creating assessments of actions systems, as supply chains, rather than establishments is further composite as borders is fluctuating (Hoek 1998). Håkansson and Prenekert (2004) theorize efficiency grounded on a dyadic system give-and-take value with exchange value being gauged by dual players concerning actions system's application of possessions.

### **2.4.2 Supply chain Effectiveness**

One of the supply chain performance indicators is effectiveness which is referred as firm's ability to come up with solutions aimed at providing value to customers at various customers' points of collection than available prices or offers (Möller and Törrönen, 2003). The above definition appears to match effectiveness to commercial action as being capability to come up with fresh resolutions with additional significance is accentuated. Therefore firms need to ensure that their processes are effective and being effective means customers are getting required products in time as per the ordered quantity. Effectiveness is generated in an association by the practice of courtesy to diverse interdependencies, i.e. the assessor is prejudiced in its assessment hence it is heavily recommended that effectiveness should be assessed without any alterations because it adds value in supply chain and is groupings of ancillary paybacks got over the merchant and the vendor networks (Walter et al. 2001).

### **2.4.3 Reliability**

According to PLS Logistics, 2016 Supply chain reliability was defined to be the extent to which consistent performance are yielded by a supply chain. The top priorities activities for supply chain professionals include Increase of reliability, reduction of inventory as well as forecasting and preparing for demand. The reliability of a supply chain is critical in efforts of implementation of an operative supply chain management strategy in humanitarian organizations in Kenya since it enhances the speed on relief response and most importantly, brings down costs. Performance that is on-time and consistent is most often credited to a good working relationship with shipper/carrier. The general performance of a non-profit body is reliant on its capability to increase reserves for purposes of fulfilling firm's short term and long-term objectives (Ritchie & Kolodinsky, 2003).

Poister (2003) argues that humanitarian organizations shouldn't focus merely on presently desired monetary resource and a high-class emphasis on fund drives and financial signs since this swings attentions from of consistency of additional features of performance related to output, effectiveness, and quality and customer satisfaction. Therefore

humanitarian organization's supply chain management practice should build perpetual solutions and be sufficiently resourced towards great interest in knowing how successful goals are accomplished in dealing with disasters.

#### **2.4.4 Responsiveness**

When considering the humanitarian supply chain, problems arise when addressing the issue of responsiveness in customer (business sector) or beneficiary. Reason is because in the humanitarian supply chain, rarely is the beneficiary the "customer" to be satisfied, but rather the donor. Hence, it is important that the unstable nature of funding must be addressed by agility in the context of humanitarian supply chains (Bennett and Kottasz, 2000), whereby organizations, under short notice are needed to pool huge amount of funds to intervene in cases of emergency.

Agreeing with Bennett and Kottasz, instruction from donor governments that a specific portion of the aid be directed at particular operations for relief in specified nations force humanitarian organizations to direct their attention on relief and distribution activities in short term rather than investing in supply chain/logistics systems and processes in the long term. Currently, most humanitarian supply chains are foreign owned, with majority of the local sustainability mechanism worn-out and replaced with the over dependence on donors by the said communities that have been affected whereby majority hail from the developing world.

The argument by Muriel Skeet's (1977) in his work on disaster manual for relief workers, he points out the delicate balance that exists between supplies and the population in majority of poor countries, especially food. Minor changes in the latter can result to detrimental impacts on the former and the Governments in unindustrialized nations are occasionally not in a position to build up stocks of food or equipment for critical times and no plans for handling national disaster plans exist at all.

Therefore there is need for agility in the supply chains in the humanitarian organizations, UNHCR included, so as the global needs of their recipients can be met. The environment surrounding the supply chain is dynamic in nature, thus the need for continuous assessments to facilitate response planning, revision of resolutions and enhancements

## **2.5 Supply Chain Practices and Supply Chain Performance**

Due to shifting dynamics in the current environment, there has been a shift in the frontline from performance of individual firms to supply chain performance. Kluwer, (2004), defined the supply chain performance to be the degree to which activities in the supply chain meet requirements or needs of end-customer, including availability of products, deliveries made on time, as well as all essential inventories and capabilities in the supply chain to distribute that performance in a responsibly.

Measures of performance in the supply chain are precarious for maximizing worth in the supply chain and maintaining oversight. Therefore Humanitarian supply chain performance is measure in the delivery aspects of, reliability, flexibility, cost, customer satisfaction and responsiveness. The supply chain performances metrics facilitate organizations to benchmark thus evaluate performance both internally and externally run comparisons with other firms. Applying these performance metrics internally and externally ensures that non-value adding activities are eliminated, order variations are reduced, product flows are faster, time, materials and human resources are utilized more efficiently, and the bullwhip effect is reduced (Frohlich& Westbrook, 2001).

## **2.6 Empirical Literature**

Mohammed, (2012) did a research on SCM practices Supply chain management practices and performances of humanitarians organizations descriptive study approach with the sample of 28 humanitarian organizations .The study findings was that there constructive link amongst practices and performance hence the success of humanitarian supply chain was only through a properly endowed supply chain .It focused on the effects of supply chain Management practices on performance on a similar not, however, the study was conducted over a years ago and a similar study would help to bring out the difference on contemporary issues.

Munguti (2010), did a study on supply chain management practices in disaster operation using descriptive study approach and a sample of 27 humanitarian Organizations found out that SCM practices improved the success of humanitarian organizations and the study stated the SCM Practices that can be applied to humanitarian organizations .The study focused on a wide scope of supply Chain management practices.

Mungatia (2010) did a study on effectiveness of supply chain management strategy in disaster management using Case study approach and content analysis found out that SCM strategy has led to the management and response to disasters effectively and the study can be replicated by individual agencies that carry humanitarian work. This study was limited to supply chain strategy in disaster management.

Paderborne, (2009) examined a reference model for supply chain management processes using the Information system approach and the study found out that SCM is of crucial importance for effectiveness and efficiency of humanitarian operations and there is high degree of difficulty in humanitarian supply chain. The study reference provided a tool for humanitarian organization to rapidly visualize the tasks carried out by humanitarian organization .Therefore it was limited to the reference model which limited organizations to perform superiorly than its competitors.

Bissau, (2010) Effectiveness of UNCHR supply chain management strategies using case study approach and purposive sampling the study found out that SCM strategies did not work, due to poor supply structuring and staffing approach. The study revealed a worrying delivery trend that was likely to jeopardize the cohesion between UNHCR, donors and beneficiaries. The study was limited to one humanitarian organization.

Olontruba and Gray, (2009) Customer service in emergence relief chain using literature based review identified that understanding customers various prospects provides a starting point in the development of relief chain hence Study emphasized on the different and varying requirements of the customers .Study therefore concentrates only on customer service in emergence relief chain.

## **2.7 Challenges Faced in Adoption of SCM Practices**

In the framework of humanitarian supply management, the levels of uncertainty in demand are very high. The reason for this is demand in relation to relief is hard to quantify, and the factors that affect it are vibrant and difficult to quantify. These aspects include catastrophe physical characteristic, the indigenous economy as well as infrastructure, social and political conditions. As the number, size, and difficulty of worldwide disasters grow, methods employed in inventory management must adjust to address these challenges (Beamon, 2004).

Nyamu,(2012) carried out a study find out the impacts of SCM challenges fronting humanitarian organizations in Kenya and its findings indicated that the foremost challenges facing humanitarian SCM were nonexistence of acknowledgment of the function of SCM in humanitarian processes, defer in humanitarian processes owing to barriers in the domestic sphere, uncertainty of demand, difficulties in efforts of trying to reach affected population resulting from poor transport means, high costs impeding the accessibility to the affected areas and being unable to forestall disaster.

In humanitarian supply chain management, catastrophe demand estimation is challenging due shortage of past data or information. In a disaster supply chain, customers include the affected populace at the area of disaster and intermediary consumers found at local or international storing amenities. The types and phase of disaster significantly dictate how the needs of these customers change (McCormick, 2001). Possessing the knowledge of ways in which individual persons work and also the type of exchanged information is of high significance so as to be able to make informed decisions regarding relevant technologies that can perform and support these exchanges and how best they can be connected (McCormick, 2001)

Another challenge is what McCormick denotes to “Tower of Babel problem” where diverse structures and principles are used for every affected segment or individual customers. Humanitarian firm’s often experience hard times in getting funds and other machineries needed for their various missions from donors and governments that will enable them



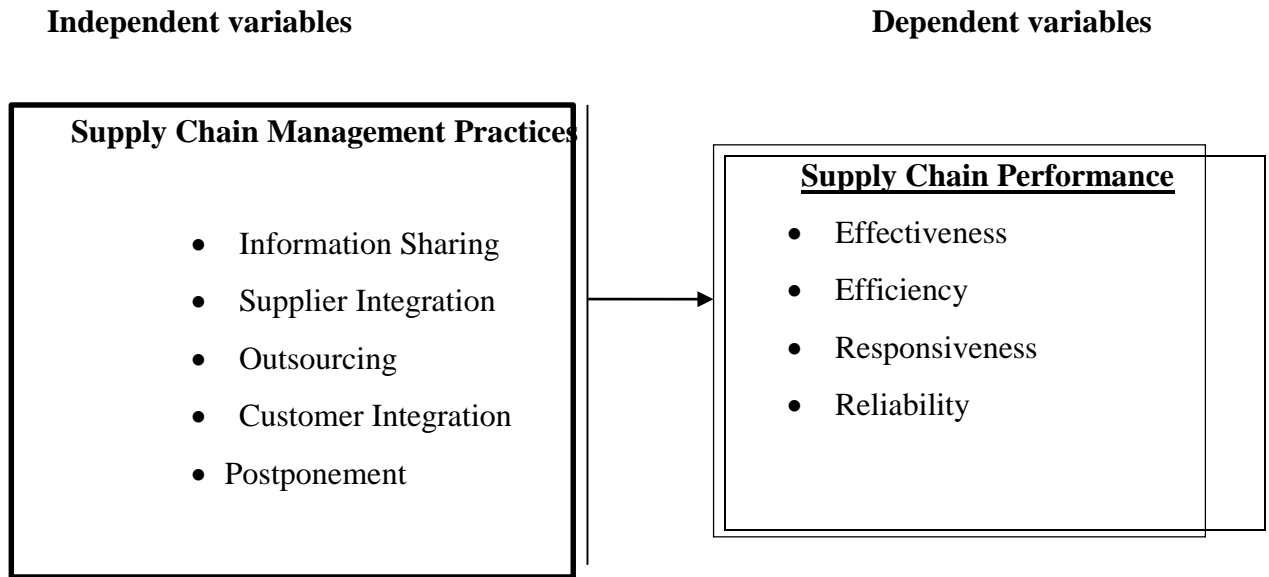
acquire requisite technology systems. For instance many donors and governments require some humanitarian institutions to be accountable to the finances offered to them which might be difficult sometimes due to the nature of operation at hand hence leaving them struggling to ensure their objective is not compromised (Lambert & Cooper, 2000).

There is also the aspect of information integration challenge where humanitarian inability to integrate the most required and appropriate information on a real-time basis within the supply chain renders institution tangled about what supplies needs to be delivered to what segment of beneficiaries at what quantity and in what location This should be improved because information integration in humanitarian supply chain heightens supply chain and logistics processes including procurement, storage and distribution of supplies to beneficiaries. It further augmentative functionality of humanitarian logistics and coordination with other players throughout the entire operation (Howden, 2009).

Lastly, majority of the humanitarian establishments are experiencing technological challenges due to the fact that they have not invested enough capital and resources in improvement and execution of current management systems, information technology or logistical systems hence we can just say most of them are in deficiency of contemporary system capability in just almost every grouping. They have similarly significantly underrated the purpose of humanitarian supply chain management and assimilated system supports which if better valued, could lead to a significant response and multiple interventions within a short time frame. Resources could be saved by simply being able to work more smartly and more efficiently (Gustavsson, 2005).

## 2.8 Conceptual Framework

The figure 2.1 below illustrates the influence of supply chain management practices on supply chain performance of humanitarian organizations in Kenya.



**Figure 2.1: Conceptual Framework**

**Source: Researcher (2018)**

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This section entails the processes as well as the methodology that will be engaged in carrying out this research. Explanations are clearly brought out on the research design that will be embraced, the research context, the targeted population for the research, sampling technique, collection of data as well as the analysis techniques that will be employed in analyzing the data that has been collected.

### **3.2 Research Design**

The study embraced descriptive research design which was considered because it assisted the researcher to establish the ways in which practices in the supply chain management impacts the performance of supply chain in humanitarian institutions in Kenya. This design was crucial and beneficial to this study due to the fact that it ensured that data was presented in a logical way therefore giving explanations about characteristics of a specific group in specified circumstances. Descriptive research design provides in detail data about the features of subjects within particular fields and therefore assisting in attempting to identify the existing relationships among the research variables.

### **3.3 Study Population**

The population of the study comprised of all the humanitarian organizations in Kenya operating in disaster situations through evacuation and provision of emergency supplies. According to the Relief web (2018), there were a total of 40 humanitarian organizations and the study employed census survey which is justified given the size of the population.

### **3.4 Data Collection**

The data collection method employed in this study was primary data. Questionnaires comprising of questions that are closed as well as open ended was distributed for data collection purposes due to the fact that simplified collection of data from the population of study as well as upholding privacy and time saving.

The sections contained in the questionnaires include first section which requires the respondents to provide details about their background information while the second section

entailed questions that concerned how firms observed practices in regards to supply chain management. The respondents comprised of all staff and its equivalent from supply chain or procurement departments with questionnaires administered to respondents personally for purposes of shortening the time required for giving responses as well as enabling clarifications to be done on-the-spot and clear of any uncertainties that might have been raised by respondents regarding any questions from the questionnaire. Nonetheless, for respondents who had time constraints, questionnaires was self-administered to provide respondents with humble time to provide their responses

### **3.5 Data Analysis**

The analysis of data collected was done by employing descriptive and inferential statistical techniques whereby percentages, measures of standard deviations and mean was employed to determine hypothesis of the study. Tables, graphs and charts was put into use so as to establish supply chain management practices adopted and the how they impacted on performance of the supply chain of humanitarian organizations in Kenya. A multiple regression model consisting of several variables combined together to fit the analytical model was used to define the affiliation amongst independent and dependents variables and will be in the following form;

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Where

Y = Supply chain Performance

a = Regression constant.

e- (Extraneous), Error term

$\beta_1, \dots, X_n$  = coefficients

X<sub>1</sub> = Information sharing

X<sub>2</sub> = Outsourcing

X<sub>3</sub> = Customer integration

X<sub>4</sub> = Supplier Integration

X<sub>5</sub> = Postponement

## **CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS**

### **4.1 Introduction**

This section consists of presentation, interpretation and discussion of findings. The drive of this research was to institute practices adopted by relief humanitarian organizations, the consequence of supply chain management practices on dependent variable and the challenges faced by relief humanitarian organizations when implementing supply chain practices.

### **4.2 Demographic Information**

The demographics on the study included response rate, Age, Gender, Education level and Work experience of the respondents as shown beneath.

The findings below indicate that 27 out of 40 respondents responded to researcher's forming answer rate of 67.5%. On age of the respondents, 26% of them were 20-25 years, 59.2% had between 26-30years, and 14.8% had amid 31-35years hence from findings it is clear that popular respondents were aged between 26-30 years hence mature and able to provide sufficient truthful data for analysis. On gender, male respondents were 67% while the female counter parts were 33% implying that the number of male respondents in this targeted population was higher than that of female by 34%.

Additionally, 22.2% of the respondents had college level of education, 63% had first degrees and 14.8% had Master's degree implying that most of the respondents had First Degree level of education hence majority of the accomplices in this study were highly qualified and qualified to offer precise data based on their extensive understanding of the study variables. Lastly, 14.8% of the respondents had 1-5 years' experience, 26% of them having 11-15 years and majority of the respondents having 48.1% representing 6-10 years of experience. 11.1% of the respondents had work experience of over 15 years and therefore from the highest number of the respondents 48.1% it's clear that most of the employees in Relief humanitarian organizations had between 6-10 years of work experience.

**Table 4.1 Demographics Distributions**

	<b>Frequency</b>	<b>Percent</b>
<b>Response rate</b>		
Responded	27	67.5
Not responded	13	32.5
<b>Total</b>	<b>40</b>	<b>100.0</b>
<b>Age</b>		
20- 25years	7	26
26-30 years	16	59.2
31-35 years	4	14.8
<b>Total</b>	<b>27</b>	<b>100.0</b>
<b>Gender</b>		
Male	18	66.7
Female	9	33.3
<b>Total</b>	<b>27</b>	<b>100.0</b>
<b>Education</b>		
Diploma level	6	22.2
University Level	17	63
Masters Level	4	14.8
<b>Total</b>	<b>27</b>	<b>100.0</b>
<b>Work experience</b>		
1-5 years	4	14.8
6-10 years	13	48.1
11-15 years	7	26.0
Over 15years	3	11.1
<b>Total</b>	<b>27</b>	<b>100.0</b>

**Source: Researcher (2018)**

### 4.3 Extent of implementation of Supply chain Management Practices

The researcher wanted to identify the extent to which supply chain management practices have been implemented by relief humanitarian firms in Kenya. The findings is as shown below,

**Table 4.2 Practice implementation Distribution**

SCM Practices	Mean	Std. Deviation
Customer integration	4.4074	.63605
Supplier Integration	4.3704	.68770
Outsourcing	4.1852	.83376
Information sharing	4.0741	.87380
Postponement	3.9259	.87380

**Source: Research Data (2018)**

The findings from table 4.6 above shows relief humanitarian organizations in Kenya adopted customer integration, supplier integration, outsourcing, information sharing and postponement to a great extent. Means of amongst 3.9259 plus 4.4074 were recorded with an inclusive mean of 4.1926 recorded representing reliefs humanitarian organizations in Kenya have encompassed the advantages connected with supply chain management practices. However, postponement practice has been adapted to a moderate extent as matched to other practices.

The results agrees with the findings of by Kiplagat (2017) on supply chain practices and its influence on organizational performance of public universities in Kenya which concluded that 60% of public universities in Kenya had embraced SCM practices to great extent. It therefore means humanitarian firms understand that supply chain management practices are very critical in supply chain operations because of its ability to enhance efficiency, effectiveness and responsiveness. The findings corresponds with the literature review in that supply chain management practices is certainly informed by the need to improve firms response time and ability to serve affected persons in time as well as a long deal with undertakings to accomplish and be reliable when disasters strikes (Kiraga, 2014).

#### 4.4 Supply Chain Performance

On supply chain performance, respondents were further asked to rate supply chain performance indicators behaviour before and after implementing supply chain management practices.

The findings is as shown on table 4.6 below

**Table 4.3: Supply chain performance**

<b>Supply chain performance</b>	<b>Mean</b>	<b>Std. Deviation</b>
Decisions are made or reached faster	4.5556	.50637
Efficiency in resources utility	4.4815	.64273
Increased reliability	4.1852	.73574
There is reduced time taken by firm to respond to various emergencies	4.1481	.71810
Ability to respond to customers' orders	4.1111	.69798
There is consistency in firm response time	4.1111	.64051
Operational efficiency has been enhanced due to information sharing and working together with other emergency agencies	4.0741	.87380
Operations have been effectively performed as a result of SCM practices adoption	4.0000	.78446
There is increased effectiveness on firm operations	3.8148	.92141
Firms are able to respond to disasters or emergencies in time	3.6296	1.00568

**Source: Research Data (2018)**

The findings on table 5.0 above undoubtedly specifies that supply chain management practices had constructive influence on supply chain performance of relief humanitarian firms since all the variables improved supply chain performance to a large extent after implementation with increased speed having a mean of (4.55) and high efficiency of resource utilization(4.48) having the highest mean indicating that implementation of supply chain practices have greater impact on speed of decision making and efficiency of resource utilization within firm supply chain. On the other hand, increased effectiveness



on firm operations and responding to disasters or emergencies in time had a lowest mean of 3.8148 and 3.6296 respectively indicating that the practices adoption has less impact on them.

#### **4.5 Supply Chain Management Practices and Supply chain Performance of Relief Humanitarian firms in Kenya**

The researcher further sought to know the relationships between supply chain management practices and supply chain performance of relief humanitarian organizations in Kenya. The study adopted multiple regression models to illustrate the anticipated link between variables and the findings area as illustrated below,

##### **4.5.1 Supply chain Management Practices and Effectiveness**

In finding out the connections amongst predictor variables and effectiveness, the outcomes were specified in the table 4.7 below,

**Table 4.4: Supply Chain Management Practices and Effectiveness**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848 <sup>a</sup>	.719	.652	.37899
<b>Source: Researcher (2018)</b>				
a. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing				

From the results in Table 4.7.1 above,  $R^2$  is 0.719 meaning that independent variables explain 71.9% of the discrepancy in supply chain performance. This implies that the five independent variables contribute 71.9% to the supply chain effectiveness of relief humanitarian organizations while remaining 28.1% is clarified by other aspects not apprehended in the study model. It is therefore justifiable to make conclusion that supply chain management practices are essential in enhancing the supply chain performance of relief humanitarian organizations given that the unexplained variance is less than forty percent.

**Table 4.5: Supply chain management practices and Effectiveness**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.724	5	1.545	10.756	.000 <sup>b</sup>
	Residual	3.016	21	.144		
	Total	10.741	26			
<b>Source: Researcher (2018)</b>						
a. Dependent Variable: Effectiveness						
b. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing						

The analysis of variance shows whether or not a model is a worthy suitable for the data and the table overhead specifies F static value as 10.756 and a substantial change of 0.000. The p values are less than the critical value ( $p < 0.05$ ) denoting that the bearing of SCM practices is statistically important on supply chain effectiveness of relief humanitarian firms in Kenya at 95% confidence level. The numerator for  $\alpha = 5\%$  whose degree of freedom (df) = (5, 21) and critical F value is (10.756.). The findings above show that the premeditated F value which is greater than the F-critical (2.6847) displays that model can be applied in forecasting the sway of independent variable on the dependent variables.

**Table 4.6: Supply chain management practices and Effectiveness**

Coefficients						
		Unstandardized Coefficient		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.909	1.653		1.155	.261
	Outsourcing	.224	.223	.156	1.008	.325
	Information Sharing	.403	.197	.266	2.048	.053
	Postponement	.481	.175	.368	2.745	.012
	Supplier Integration	.750	.174	.561	4.305	.000
	Customer integration	.321	.179	.223	1.793	.087
<b>Source: Researcher (2018)</b>						
a. Dependent Variable: Effectiveness						

The findings above on practices and effectiveness shows that the model shows performance of humanitarian firms without study variables is 1.909. Conversely, holding additional aspects constant, a unit of outsourcing would lead to 0.156 increases in supply chain effectiveness. Additionally information technology, postponement, supplier integration and customer integration would lead to 0.266, 0.368, 0.561 and 0.223 increase in effectiveness respectively. There is positive significance relation between information sharing, postponement, supplier integration, customer integration and supply chain effectiveness. This means supply chain practices are suitable predictors of dependent variable or supply chain effectiveness of relief humanitarian organizations in Kenya.

#### **4.5.2 Supply chain Management Practices and Efficiency**

In finding out the connections amongst predictor variables and efficiency, the outcomes were specified in the Table 4.8 below,

**Table 4.7: Supply Chain Management Practices and Efficiency**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 <sup>a</sup>	.858	.824	.21230

**Source: Researcher (2018)**  
a. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing

From the results in Table 4.8.1 above,  $R^2$  is 0.858 meaning that independent variables explain 85.8% of the variation in supply chain performance. This implies that the five independent variables contribute 85.8% to the supply chain efficiency of relief humanitarian organizations while remaining 14.2% is clarified by other aspects not apprehended in the study model. It is therefore justifiable to make conclusion that supply chain management practices are essential in enhancing the supply chain performance of relief humanitarian organizations given that the unexplained variance is only 14.2%.

**Table 4.8: Supply chain management practices and Efficiency**

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.720	5	1.144	25.382	.000 <sup>b</sup>
	Residual	.947	21	.045		
	Total	6.667	26			

**Source: Researcher (2018)**  
a. Dependent Variable: Efficiency  
b. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing

The analysis of variance shows whether or not a model is a worthy suitable for data and the table overhead specifies F static value as 25.382 and a substantial change of 0.000. The p values are higher than the precarious value ( $p < 0.05$ ) denoting impression of independent variable is statistically substantial on supply chain efficiency of relief humanitarian firms in Kenya at 95% confidence level. The numerator for  $\alpha = 5\%$  whose degree of freedom (df) = (5,21) and critical F value is (25.382).

The findings above show that the calculated F value is 25.382 which is greater than the F-critical (2.6847), which displays that the model can be used in predicting the sway of the independent variables on the dependent variable.

**Table 4.9: Supply Chain Management Practices and Efficiency**

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.395	.926		1.507	.147
Outsourcing	.347	.125	.306	2.782	.011
Information Sharing	.079	.110	.066	.715	.483
Postponement	.745	.098	.724	7.585	.000
Supplier Integration	.127	.098	.321	1.305	.016
Customer integration	.024	.100	.021	.235	.817

**Source: Researcher (2018)**  
a. Dependent Variable: Efficiency

The model shows performance of humanitarian firms without study variables is 1.395. However, holding other aspects constant, a unit of outsourcing would lead to 0.306 increases in supply chain effectiveness. Additionally information technology, postponement, supplier integration and customer integration would lead to 0.66, 0.724, 0.321 and 0.021 increase in effectiveness respectively. There is positive significance relation between outsourcing, postponement, supplier integration, and supply chain

effectiveness. This means supply chain practices are suitable predictors of dependent variable or supply chain effectiveness of relief humanitarian organizations in Kenya.

#### 4.5.3 Supply chain Management Practices and Responsiveness

In finding out the connections amongst predictor variables and responsiveness, the outcomes were indicated in the table 4.9 below,

**Table 4.10: Supply chain management practices and Responsiveness**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662 <sup>a</sup>	.438	.304	.53420
<b>Source: Researcher (2018)</b>				
a. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing				

From the results in Table 4.9.1 above,  $R^2$  is 0.438 meaning that independent variables explain 43.8% of the variation in supply chain performance. This implies that the five independent variables contribute 43.8% to the supply chain responsiveness of relief humanitarian organizations while remaining 56.2% is explained by other aspects not apprehended in the study model. It is therefore justifiable to make conclusion that supply chain management practices are essential in enhancing the supply chain responsiveness of relief humanitarian organizations.

The analysis of variance shows whether or not a model is a worthy fit for the data and the table below specifies F static value as 3.276 and a substantial variation of 0.024. The p values are less than the critical value ( $p < 0.05$ ) denoting that bearing of independent variables is statistically substantial on dependent variable of relief humanitarian firms in Kenya at 95% confidence level. The numerator for  $\alpha = 5\%$  whose degree of freedom (df) = (5,21) and calculated F value is (3.276). The findings above show that the calculated F value is (3.276) which is greater than the F-critical (2.6847), which shows that the model can be used in predicting the influence of the independent variables on the dependent variable.

**Table 4.11: Supply chain management practices and Responsiveness**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.674	5	.935	3.276	.024 <sup>b</sup>
	Residual	5.993	21	.285		
	Total	10.667	26			
<b>Source: Researcher (2018)</b>						
a. Dependent Variable: There is consistency in firm response time						
b. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing						

**Table 4.12: Supply chain management practices and Responsiveness**

Coefficients						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	3.874	2.330		1.663	.111
	Outsourcing	.825	.314	.575	2.630	.016
	Information Sharing	.255	.277	.168	.918	.369
	Postponement	.766	.247	.589	3.102	.005
	Supplier Integration	.005	.246	.004	.022	.983
	Customer integration	.786	.297	.537	.493	.013
a. Dependent Variable: There is consistency in firm response time						

The model shows performance of humanitarian firms without study variables is 3.874. However, holding other aspects constant, a unit of outsourcing would lead to 0.575 increases in supply chain responsiveness. Additionally information technology, postponement, supplier integration and customer integration would lead to 0.168, 0.589,

0.004 and 0.537 increase in supply chain responsiveness respectively. There is positive significance relation between outsourcing, postponement, customer integration, and supply chain effectiveness. This means supply chain practices are suitable predictors of dependent variable or supply chain effectiveness of relief humanitarian organizations in Kenya.

#### 4.5.4 Supply chain Management Practices and Reliability

In finding out the connections amongst predictor variables and reliability, the outcomes were indicated in the table 5.0 below,

**Table 4.13: Supply chain management practices and Reliability**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.720 <sup>a</sup>	.519	.404	.32709
<b>Source: Researcher (2018)</b>				
a. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing				

From the results in Table 4.7.1 above,  $R^2$  is 0.519 meaning that independent variables explain 51.9% of the variation in supply chain reliability. This implies that the five independent variables contribute 51.9% to the supply chain reliability of relief humanitarian organizations while remaining 48.1% is explained by other aspects not apprehended in the study model. It is therefore justifiable to make conclusion that supply chain management practices are essential in enhancing the supply chain reliability of relief humanitarian organizations.

The analysis of variance shows whether or not a model is a worthy suitable for the data and the table below shows F static value as 4.524 and a substantial variation of 0.006. The p values are less than the critical value ( $p < 0.05$ ) denoting that the impression of independent variables is statistically substantial on supply chain performance of relief humanitarian firms in Kenya at 95% confidence level.



**Table 4.14: Supply chain management practices and Reliability**

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.420	5	.484	4.524	.006 <sup>b</sup>
	Residual	2.247	21	.107		
	Total	4.667	26			
<b>Source: Researcher (2018)</b>						
a. Dependent Variable: Reliability						
b. Predictors: (Constant), Customer integration, Postponement, Supplier Integration, Information Sharing, Outsourcing						

**Table 4.15: Supply chain management practices and Reliability**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.951	1.426		1.367	.186
	Outsourcing	.377	.192	.497	1.961	.043
	Information Sharing	.058	.170	.058	.340	.738
	Postponement	.313	.151	.464	2.071	.041
	Supplier Integration	.292	.150	.432	1.943	.046
	Customer integration	.260	.155	.274	1.679	.108
	<b>Source: Researcher (2018)</b>					
a. Dependent Variable: Reliability						

The model shows performance of humanitarian firms without study variables is 1.951. Nonetheless, holding other aspects constant, a unit of outsourcing would lead to 0.397 increases in supply chain reliability. Additionally information technology, postponement, supplier integration and customer integration would lead to 0.058, 0.464, 0.432 and 0.274 increase in supply chain reliability respectively. There is positive significance relation between outsourcing, postponement, supplier integration, and supply chain reliability. This means supply chain practices are suitable predictors of dependent variable or supply chain effectiveness of relief humanitarian organizations in Kenya.

#### **4.5.5 Supply chain management practices and Overall Supply chain Performance of relief Humanitarian firms in Kenya**

The researcher further sought to know the associations amongst supply chain management practices and overall supply chain performance of relief humanitarian organizations in Kenya. The findings is showed on tables below,

**Table 4.16 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error Estimate
1	.851 <sup>a</sup>	.725	.659	.29564

**Source: Researcher (2018)**

- a. Predictors: (Constant), Customer integration, Outsourcing, Information Sharing, Supplier Integration, Postponement

From the results in Table 4.7 above,  $R^2$  is 0.725 meaning that independent variables explain 72.5% of the variation in supply chain performance. This suggests that independent variables contribute 72.5% to the supply chain performance of relief humanitarian organizations while remaining 28.5% is explained by other aspects which have not been seized in the study model. It is therefore justifiable to make conclusion that supply chain management practices are essential in enhancing the supply chain performance of relief humanitarian organizations given that the unexplained variance is only 28.5%.

**Table 4.17 Analysis of Variance**

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.831	5	.966	11.055	.000 <sup>b</sup>
	Residual	1.835	21	.087		
	Total	6.667	26			
<b>Source: Researcher (2018)</b>						
a. Dependent Variable: Supply chain performance						
b. Predictors: (Constant), Customer integration, Outsourcing, Information Sharing, Supplier Integration, Postponement						

The analysis of variance shows whether or not a model is a noble suitable for the data and findings specifies F static value as 11.055 and a substantial variation of 0.000. The p values are less than the critical value ( $p < 0.05$ ) denoting influence of supply chain management practices is statistically substantial on supply chain performance of relief humanitarian firms in Kenya at 95% confidence level. The numerator for  $\alpha = 5\%$  whose degree of freedom (df) = (5,21) and calculated F value is (11.055). The findings above display calculated F value is (11.055) which is greater than the F-critical (2.6847), which shows that the model can be used in predicting the effect of the independent variables on the dependent variable.

**Table 4.18 Coefficients**

Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
	(Constant)	2.645	1.499		-1.765	.092
	Outsourcing	.330	.129	.313	2.566	.018
	Information Sharing	.416	.136	.404	3.048	.006
	Postponement	.617	.145	.611	4.252	.000
	Supplier Integration	.402	.138	.369	2.914	.008
	Customer integration	.217	.137	.217	1.589	.127

**Source: Researcher (2018)**

a. Dependent Variable: Supply chain performance

From table 4.7 above, the resulting regression equation is  $Y = 0.2.645 + 0.313 X_1 + 0.404X_2 + 0.611X_3 + 0.369X_4 + 0.217X_5$  Where:  $x_1$  represents outsourcing,  $x_2$  =Information sharing,  $x_3$  = Postponement,  $x_4$ = Supplier integration and  $x_5$  customer integration.

The model shows performance of humanitarian firms without study variables is 2.645. Though, holding other factors constant, a unit of outsourcing would lead to 0.313 increases in supply chain performance. Additionally information technology, postponement, supplier integration and customer integration would lead to 0.404, 0.611, 0.369 and 0.217 increase in supply chain performance respectively. There is a positive significance relation amongst all study variables and supply chain performance except customer integration which has a p-value exceeding 95% significance level. This means all variables are suitable predictor of dependent variable or supply chain performance of relief humanitarian organizations in Kenya.

#### 4.6 Supply chain Challenges

In regard to defies fronting enactment of supply chain management practices at relief humanitarian firms in Kenya, the researcher pursued to determine the extent to which several encounters influence enactment of study variables .The results of the findings are as shown below,

**Table 4.19: Supply chain challenges**

<b>Challenges</b>	<b>Mean</b>	<b>ST. Deviation</b>
Huge cost of implementations	4.25	.78640
Lack of management support and assurance	4.20	.89443
Insufficiency trainings and awareness of practices	4.10	.85224
Resistance to enactment from integrated partners	4.05	.75915
Unproductive communication of firm long-term plans	3.90	.64072
Failing to link various actions with specific deliverables	3.85	.48936
Existence of insufficient info systems associations	3.8	.69585
Existing conflicts amongst supply chain associates	3.80	.89443
Fluctuating culture	3.65	.48936
Insufficient supply chain performance measures	3.55	.68633

**Source: Research Data (2018)**

From the findings above, it is practical that humanitarian firms are affected by challenges as they try to adopt and implement supply chain management practices to an average mean of 3.915 suggesting that such firms face challenges to a moderate extent. However some challenges was noted to be greatly experienced by humanitarian firms including huge cost of implementation (4.25), Nonexistence of management support and assurance (4.20), Insufficiency trainings and awareness of practices (4.10) and Resistance to enactment from integrated partners (4.05).The remaining challenges had a mean of below four hence it was concluded that it was experienced by humanitarian firms to a moderate extent.it is recommended that humanitarian firms should put measures in place to address the above challenges in order to successfully implement supply chain management practices in their various institutions.

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

### **5.1 Introduction**

The drive of this research was to realize supply chain management practices and its impressions on supply chain performance of relief humanitarian organizations in Kenya, extent of adoption of and the challenges of faced during implementation of same supply chain management practices. This section therefore gives a summary of study findings, providing assumptions and recommendations which replicate the responses to exact inquiries for possible actions and recommendations for further research.

### **5.2 Summary of Findings**

The researcher administered questionnaires to relief humanitarian firms in Kenya and managed to get sixty seven percent response rates. In relation to respondents' demographics, the studies found out that, Majority of the respondents were male while the female accounting the less indicating that relief humanitarian organizations in Kenya have not observed gender balance in their organizations. The research further found out that most of the respondents were aged between twenty six to thirty years followed by those between twenty to twenty five years. Those between thirty one to thirty five years of age had the least percentage implying that most humanitarian firms in Kenya consist of young employees who are below thirty years. Most of the respondents were University graduates followed college level and masters level respectively. Therefore, higher percentage of the participants in this study is highly qualified. Most of the respondents indicated that they have an experience six to ten years, followed by those with eleven to fifteen years' experience and one to five years respectively. Respondents with work experience of above fifteen years were with the least percentage.

In regard to the extent to which various supply chain management practices has been adopted at relief humanitarian firms, the findings showed that relief humanitarian organizations in Kenya adopted customer integration, supplier integration, outsourcing, information sharing and postponement to a great extent. Means of between three and four

were registered with an overall mean of four registered indicating relief humanitarian organizations in Kenya have embraced the merits associated with supply chain management practices. However, postponement practice has been adapted to a moderate extent as compared to other practices. The findings corresponds with the literature review on research done by Kiplagat (2017) on supply chain practices and its effects on organizational performance of public universities in Kenya which concluded that sixty percent of public universities in Kenya had adopted SCM practices to great extent.

The finding on whether there was a relationship between independent and dependent variable, the study found out that when all variables are held at zero (constant), the value of supply chain performance would be at zero point three. However, holding other factors constant, a unit of outsourcing would lead to increases in supply chain performance. Additionally information technology, postponement, supplier integration and customer integration would also lead to increase in supply chain performance respectively with a positive significance relation between supply chain performance and study variable of information sharing with significance.

The findings on analysis of variance showed that the calculated F value are greater than the F-critical, which shows that the model can be used in predicting the impact of the independents variables on the dependents variables.

The finding on coefficient of determination showed that independent variables explain fifty six percent of the variation in supply chain performance implying that the five independent variables contribute fifty six percent to the supply chain performance of relief humanitarian organizations while remaining percentage is explained by other factors which have not been captured in the study model.

The findings on supply chain performance clearly indicated that supply chain management practices had positive influence on supply chain performance of relief humanitarian firms since all the variables improved supply chain performance to a large extent after implementation indicating that implementation of supply chain practices have greater impact on speed of decision making and efficiency of resource utilization within firm

supply chain. Increased effectiveness on firm operations and responding to disasters or emergencies in time had a lowest mean indicating that the practices adoption has less impact on them.

The study found out that it is practical that humanitarian firms are affected by challenges as they try to adopt and implement supply chain management practices to a moderate extent. However some challenges were noted to be greatly experienced by humanitarian firms including huge cost of implementation, Nonexistence of management support and assurance, Insufficiency trainings and awareness of practices and Resistance to enactment from integrated partners. The remaining challenges had a mean of below four hence it was concluded that it was experienced by humanitarian firms to a moderate extent. It is therefore recommended that humanitarian firms should put measures in place to address the above challenges in order to successfully implement supply chain management practices in their various institutions.

### **5.3 Conclusion**

The study settles that the embracing of supply chain management practices to relief humanitarian firms have a high significance in the improvement of their supply chain performance henceforth measures should be positioned in place to ensure supply chain management practices mentioned are completely embraced. From the study findings it can be concluded that SCM practices have affected supply chain performance of relief humanitarian firms to a great extent. Conclusions were also reach on the extent to which study variables have been adopted which is to a great extent. The research also concluded that lack of clear benefits of outsourcing, Negative attitude by employees, Lack of top management support and commitment, cost and profit allocation, resistance to change, misunderstanding of outsourcing were the most faced challenges.

### **5.4 Limitations of the study**

The study was carried smoothly however some few limitations was experienced by researcher but nevertheless researcher was determined to produce proper and accurate findings. Some of the challenges were the timeframe available for carrying out the research



which was seen as minimal given the slow nature of respondents in filling questionnaires. It is believed that if more time was given, the accuracy and response rate could have improved to a significant extent. Additionally there was a challenge of resources availability given that the study was covering diverse humanitarian firms hence it required so huge resources in terms of finances to collect and analyze such quantitative data. Some respondents also took long time in filling questionnaires which prompted researcher to make frequent calls and efforts to convince them fill them and hence being costly to researcher.

Another limitation faced by researcher in the field was reluctance to offer information citing their information is confidential and copyrighted hence attempt to provide sought information would be used to intimidate them or create a negative image of the institution they work for. Finally, the outcomes of this study were mostly grounded on respondents 'opinions about their firm hence the researcher had no unlimited control of the exactness of sought information.

### **5.5 Recommendations**

The objective of supply chain management practices in a company is to facilitate enhancement of supply chain efficiency, customer satisfaction and reduce the cost of operation in order to ensure firms are attaining their long-term and institutional objectives. The study recognized that by adopting supply chain management practices can aid improve effectiveness and lessen response time, which is precarious in attaining sustainability of humanitarian related firms. The study applauds that relief firms need to come up and design this activities and controls system contingent on their magnitude so as to make sure that humanitarian firms requirements are responded to hence this research made conclusions that in as much as organizations don't fully appreciate the benefits associated with supply chain management practices, their significance exceeds the problems faced by firms and therefore it should be fully embraced to ensure greater efficiency, flexibility and reduce on disaster response time. The study endorses that humanitarian firms should employ knowledgeable persons to be entrusted in enactment, administration and quantifying of supply chain operations or activities.

## **5.6 Suggestion for Further Studies**

This study focused on founding effects of supply chain practices on supply chain performance of relief humanitarian firms in Kenya and the extent to which SCM practices has been embraced. Further research needs to be done to test practices effects on organizational or operational performance as well as other organizations apart from relief humanitarian. Other studies need to be done which analyzes quantitative aspects of performance such as operational, responsiveness and institutional performance.

## REFERENCES

- Abdifatah, H. M. (2012) Supply chain management practices and their impact on performance among humanitarian organizations in Kenya, *An MBA Research Project Submitted to the University of Nairobi*
- Bayraktar, E., Demirbag, M., Koh, S.C.L., Tatoglu, E., Zaim, H. (2009). A causal analysis of the impact of information systems and supply chain practices on operational performance of manufacturing SMEs in Turkey, *International Journal of Production Economics*.
- Cooper, C., Lambert, M. and Pagh, D. (2000), "Supply chain management: more than just a new name for logistics", *International Journal of Logistics Management*,
- Cigolini R, Cozzi M, Perona M., (2004). A new framework for supply chain management: conceptual model and empirical test. *International journal of operations and production management*
- Cooper, D. & Schindler, P. (2003), *Business Research methods*, (8th ed.), New Delhi: Tata McGraw Hill
- Donlon, J.P. (1996), "Maximizing value in the supply chain", Chief Executive
- D. Farrow, W. Young, and L. Bruce, "The Development of a Test of Reactive Agility for Netball: A New Methodology," *Journal of Science and Medicine in Sport* 8 no. 1 (2005): 52-60.
- Flynn, B.B. and Flynn, E.J. (2005), Synergies between supply chain management and quality management: emerging implications. *International Journal of Production Research*
- Fawcett, S. & Magnan (2008). Benefits, barriers and bridges to effective supply chain management, *Supply chain Management: An International Journal*, 13(1) 35-48
- Flynn, B.B., Huo, B. and Zhao, X. (2010), the impact of supply chain integration on performance, *Journal of Operations Management*, pp. 58–71.
- Gunasekaran A, Patel C & Tirtiroglu E (2001) Performance measures and metrics in Supply chain environment. *International Journal of Operations & Production Management*
- Gunasekaran, A., Patel, C., Ronald, E. and McGaughey, E. (2004). A framework for supply chain performance measurement *Int. J. Production Economics*,

- Henri, J. (n.d) Performance Measurement and Organizational Effectiveness: *Bridging the Gap*. University of Laval, Canada
- Hill, A., (2007). How to organize operations: Focusing or splitting? *International Journal of Production Economics*
- Kanjejo A. Joan (2012) Lean Supply Chain Management Practices in the Public Universities, MBA
- Kiplagat .H. (2017) Supply chain management practices and organizational performance of public universities in Kenya, Unpublished MBA project, University of Nairobi, 2017
- Lee, C and Severance, D. (2007). Relationship between supply chain performance and degree of linkage among suppliers and customers, *Supply Chain Management: An International Journal*, 444 – 52.
- Lysons, K. and Farrington, B. (2006), *Purchasing and Supply Chain Management*, 7th ed. Financial Times/Prentice-Hall, London
- Mentzer et al, (2001) Defining Supply Chain Management. *Journal of Business Management*
- Min, S. and Mentzer, J.T. (2004), Developing and measuring supply chain concepts, *Journal of Business Logistics*, 63-99
- Mahulo .W. (2015), E. Supply chain management practices and performance of cement companies in Kenya
- Mugenda, O.M and Mugenda, A.G. (1999) *Research Methods: Quantitative and Qualitative Approaches*, African Center of Technology Studies, Nairobi
- Mwilu, J.M. (2013). Supply chain management practices and performance among public research institutions in Kenya. *Unpublished University of Nairobi*
- Nyamasege, O. and Biraori, O. (2015).Effect of supplier relationship management on the effectiveness of supply chain management in the Kenya public sector .*International Journal of managing Value and Supply Chains (IJMVSC)*.
- Nyamwange S.O ‘Operations strategies applied for the competitiveness of Kenyan largemanufacturing firms’. Unpublished MBA project, University of Nairobi,2001
- OketchShimuli, C., (2014) Supply chain performance and performance of manufacturing pharmaceutical firms in Kenya.*Unpublished University of Nairobi*

- Okongwu, C., Burkhart, F., Moncef, B. (2015) Causal linkages between supply chain management practices and performance: A balanced scorecard strategy map perspective; *Journal of manufacturing technology*,
- Poister (2003) Measuring Performance in Public and Nonprofit Organizations
- Ruey, Bryan Jean, (2008) Information technology and organizational performance within international business to business relationships: *A review and an integrated conceptual framework*, *International Marketing Review*
- R.J. Bradshaw, W.B. Young, A. Russell, and P. Burge, "Comparison of Offensive Agility Techniques in Australian Rules Football," *Journal of Science and Medicine in Sport* 14, no. 1 (2010): 65-69.
- SooWook Kim (2006) Effect of supply chain management practices integration and competition capability on performance. *International Journal*
- Solakivi, T., Töyli, J., Ojala, L. (2014). Logistics outsourcing, its motives and the level of logistics costs in manufacturing companies operating in Finland, *Production Planning & Control: The Management of Operations*.
- Spens, K. and Bask, A. (2002). Developing framework for supply chain management, *international Journal of Logistics Management*
- Zhou, H. and Benton, W.C. Jr (2007), Supply chain practice and information sharing, *Journal of Operations Management*
- PLS Logistics, (2016), Supply Chain Management Best Practices: Reliability  
<http://info.plslogistics.com/blog/supply-chain-management-best-practices-reliability>

## APPENDICES

### Appendix I: Research Questionnaire

This questionnaire has been designed to collect information on supply chain management practices and supply chain performance of humanitarian firms in Kenya. Please read carefully and answer the questions as honestly as possible. The information gathered will be used purely for the purpose of academic research and will be treated with utmost confidence.

#### Instructions

1. Tick appropriately in the box or fill in the space provided.
2. Feel free to give further relevant information to the research.

#### PART A: BIOGRAPHIC INFORMATION

##### 1. Gender:

Male ( ) Female ( )

##### 2. Your age bracket

20-25 years ( )      26-30 years ( )      31-35 years ( )

Above 40years ( )

##### 3. Highest level of education

College Level ( )      University Level ( )      Masters Level ( )

##### 4. How long have you been working with the firm?

1-5 years ( )      6-10 years ( )      11-15 years ( )      16-20 years ( )      above 20years ( )

**PART B: SUPPLY CHAIN MANAGEMENT PRACTICES IMPLEMENTED AT YOUR NGO**

5. To what extent has the following practices been implemented at the firm?

Use **1-** Very low extent, **2-**Low extent, **3-**Moderate extent, **4-** Great extent, **5-** Very great extent

<b>SCM PRACTICES</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<p><b>Outsourcing</b> e.g. outsourcing of services such as Security ,cleaning, catering or any other</p>					
<p><b>Information sharing</b> With customers ,suppliers and all levels of management or campuses through use of supply chain technologies such as EDI and ERP</p>					
<p><b>Postponement</b> Moving forward one or more operations or activities (making, sourcing and delivering) to a much later point in the supply-chain</p>					
<p><b>Supplier Integration</b> Ensuring there is a close relationship with suppliers and also platforms to solve issues or conflicts arising between the two. Having clear and compatible communication channels</p>					
<p><b>Customer integration</b> Putting in place mechanism to address customer complaints and ensuring their service delivery feedback is</p>					

integrated in decision making processes					
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**PART B: SUPPLY CHAIN MANAGEMENT PRACTICES AND SUPPLY CHAIN PERFORMANCE**

6.) Indicate using a tick (√) to what extent do you agree that supply chain management practices below have influenced the supply chain performance of the firm. Rate using a scale of 1-5, where: 1 strongly disagree, 2 Disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree

<b>SCM PRACTICES</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Postponement</b>					
There is forward movement of one or more operations or activities to a much later point in the supply-chain					
Matching the type of products, market demands of a company, and structure or constraints within the manufacturing and logistics system					
There is delay in the point of commitment of WIP inventory into a particular end product					
<b>Information sharing</b>					
Formal information sharing about new product launch with key suppliers					
SC partners being informed in advance of changing needs					
SC partners sharing information with the organization that helps establishment of business planning					
SC partners sharing proprietary information with the firm					
sharing supply chain knowledge of core business processes with the organization					
<b>Supplier integration</b>					



Key suppliers are included in planning and goal setting activities					
Including Key suppliers in continuous improvement programs					
Regularly solving problems jointly with Suppliers and negotiating for long term contracts					
Creating compatible information system with key suppliers					
Closely monitoring Supplier performance for the basis for future business					
<b>Customer integration</b>					
involving customers in demand forecasting and product development					
Inspection and monitoring the quality of materials and products from suppliers					
Customer and supplies feedback is obtained on services adequacy through customer and supplier management					
The firm participates in the customers marketing					
<b>Outsourcing</b>					
There is a monitoring mechanism for quality of outsourced services by the organization.					
There is existence of an outsourcing policy that the organization adheres to.					
Services that are not core to the organization are outsourced.					

**PART C: SUPPLY CHAIN PERFORMANCE**

7. Below are statements describing on Performance. Kindly indicated the level to which you agree with them in accordance to the following scale:1-Not at all, 2-low extent, 3-moderate extent, 4-large extent, 5-very large extent

No.	Statement	1	2	3	4	5
1	There is an increased level of reliability that influences the operations					
2	Firms are able to respond to disasters or emergencies in time					
3	Operational efficiency has been enhanced due to information sharing and working together with other emergency agencies					
4	Operations have been effectively performed as a result of SCM practices adoption					
5	There is increased speed with which decision making can be undertaken within the firm					
6	There is high efficiency of resource utilization within firm supply chain					
7	There is reduced time taken by firm to respond to various emergencies					
8	There is high response to dynamic customer needs					
9	There is consistency in firm response time					
10	There is increased effectiveness on firm operations					

**PART D: CHALLENGES**

**10.)** Please indicate the extent to which each of the following supply chain management challenges are faced during implementation of SCM practices by your firm?

Use a Likert scale of= **1.**No extent **2.**small extent**3.**Medium extent **4.**large extent **5.**Very large extent

	<b>Challenges</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
<b>I</b>	Changing organization culture while implementing supply chain practices is difficult					
<b>ii</b>	Lack of top management support and commitment					
<b>iii</b>	Lack of training and sensitization of SCM practices on procurement officials					
<b>iv</b>	Existing conflicts amongst supply chain partners					
<b>v</b>	Failing to tie the supply chain activities with specific deliverables					
<b>vi</b>	Ineffective communication of the vision and plan for SCM practices implementation in the workforce					
<b>vii</b>	High cost associated with SCM practice implementation					
<b>viii</b>	Inadequate supply chain performance measures					
<b>ix</b>	Existence of inadequate information systems linkages within the supply chain					
<b>x</b>	Resistance to implementation from procurement staff and suppliers					

## **Appendix II: List of Relief Humanitarian Organizations in Kenya**

- 1. Action Against Hunger**
- 2. African Development Solutions (ADESO)**
- 3. Care International**
- 4. Caritas International**
- 5. Cash Learning Partnership (CALP)**
- 6. Catholic Relief Services (CRS)**
- 7. Christian Aid**
- 8. Danish Refugee Council (DRC)**
- 9. Emergency Nutrition Network (ENN)**
- 10. Feed the Children**
- 11. Feed the Hungry**
- 12. Food and Agriculture Organization (FAO)**
- 13. Food For The Hungry International (FHI)**
- 14. GOAL International**
- 15. Help-Age International**
- 16. Hunger Plus**
- 17. International Committee of the Red Cross (ICRC)**
- 18. International Federation of Red Cross and Red Crescent Societies (IFRC)**
- 19. International Organization for Migration (IOM)**
- 20. International Medical Corps (IMC)**
- 21. International Rescue Committee (IRC)**
- 22. Islamic Relief**
- 23. Lutheran World Federation**
- 24. Médecins Sans Frontières (MSF)**
- 25. Mercy Corps (MC)**
- 26. Norwegian Church Aid (NCA)**
- 27. Overseas Development Institute (ODI)**
- 28. Oxfam GB**
- 29. RED R - UK**

30. Refugees International
31. Relief International
32. Save the Children International
33. Tear-fund International
34. The Office of U.S. Foreign Disaster Assistance (OFDA)
35. United Nations Children's Fund (UNICEF)
36. United Nations High Commissioner for Refugees (UNHCR)
37. United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA)
38. United States Agency for International Development (USAID)
39. World Vision International (WVI)
40. World Food Program (WFP)

**Source: The Relief Web (2018)**