

**SUPPLY CHAIN INTEGRATION AND SUSTAINABLE
COMPETITIVE ADVANTAGE OF HUMANITARIAN
ORGANIZATIONS IN KENYA**

BY

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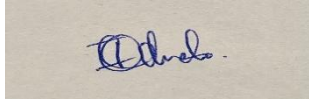
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DEDICATION

This piece is devoted to my dear husband, lovely children, my adoring mother and, friends for the prayers and support they accorded me in my pursuit of further education.

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TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF FIGURES	vii
LIST OF TABLES	viii
ABBREVIATION AND ACRONYMS	ix
ABSTRACT.....	x
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.2 Research Problem	6
1.3 Research Objectives.....	8
1.4 Value of the Study	8
CHAPTER TWO: LITERATURE REVIEW	10
2.1 Introduction.....	10
2.2 Theoretical Framework.....	10
2.3 Supply Chain Integration	14
2.4 Competitive Advantage	17
2.5 Supply Chain Integration and Competitive Advantage of Organization	19
2.6 Conceptual Framework.....	20
.....	21
CHAPTER THREE: RESEARCH METHODOLOGY.....	22
3.1 Introduction.....	22
3.2 Research Design.....	22
3.3 Population	23
3.4 Data Collection	23
3.5 Data Analysis	24

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS	26
4.1 Introduction.....	26
4.2 Response Rate.....	26
4.3 General information	26
4.4 Supply Chain Integration	29
4.5 Sustainable Competitive Advantage	33
4.6 Supply Chain Integration and Sustainable Competitive Advantage	36
4.7 Discussion of Findings.....	39
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	42
5.1 Introduction.....	42
5.2 Summary of the study	42
5.3 Conclusions.....	44
5.4 Recommendations.....	45
5.5 Suggestions for future research.....	47
REFERENCES	48
APPENDICES	53
Appendix 1: Collection Letter	53
Appendix 2: Research Questionnaire.....	54
Appendix 3: Humanitarian Organizations Kenya (2022)	58

LIST OF FIGURES

Figure 2. 1 Conceptual Framework.....	21
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LIST OF TABLES

Table 4. 1 Rate of Response	26
Table 4. 2 Respondent's Gender	27
Table 4. 3 Age Distribution	27
Table 4. 4 Academic Qualifications.....	28
Table 4. 5 Length of service	28
Table 4. 6 Supplier Integration	30
Table 4. 7 Customer Integration	31
Table 4. 8 Internal Integration	33
Table 4. 9 Supply Chain Integration and Cost	34
Table 4. 10 Supply Chain Integration and Timeliness	34
Table 4. 11 Supply Chain Integration and Quality	35
Table 4. 12 Supply Chain Integration and Flexibility and Service Delivery	36
Table 4. 13 Regression Model Summary	37
Table 4. 14 ANOVA Analysis of the study	37
Table 4. 15 Regression coefficients	38

ABBREVIATION AND ACRONYMS

CSCMP	Council of Supply Chain Management Professionals
NGO	Non-Governmental Organisations
RI	Relief International
SC	Supply Chain
SCA	Sustainable Competitive Advantage
SCI	Supply Chain Integration
SCM	Supply Chain Management
SCOR	Supply Chain Operations Reference
SRM	Supplier Relationship Management
WFP	World Food Programme

ABSTRACT

The current business setting is a competitive one and thus forces firms to focus more on delivery of value to customers like never before. As a result of the said competitiveness, several changes need to be implemented. One of the ways through which the entities may achieve competitiveness is by integrating their supply chains. Production of valuable products makes supply chains more responsive thus improving their competitiveness. The purpose of the study was to investigate the influence of Supply Chain Integration on Sustainable Competitive Advantage of Humanitarian Organizations in Kenya. The objectives were to find out the extent to which supply chain integration is implemented by humanitarian organizations in Kenya and to establish how Supply Chain Integration and Sustainable Competitive Advantage of Humanitarian Organizations relate. Descriptive research design was adopted. A study population of 41 licensed Humanitarian Organization in Kenya was used. The paper used primary data that was acquired using questionnaires (administered via electronic mails). Descriptive statistics was used to examine the adoption level of Supply Chain Integration by Kenyan Humanitarian Organizations. Regression analysis was utilized to establish the relationship between Supply Chain Integration and Sustainable Competitive Advantage of Humanitarian Organizations. The study findings indicated that Supplier integration, client integration and internal integration were all largely adopted. Further, the study established that supplier integration influenced sustainable competitive advantage of Humanitarian organizations in Kenya. Customer integration was found to influence sustainable competitive advantage of Humanitarian organizations in Kenya. Lastly, internal Integration was also found to impact sustainable competitive advantage of Humanitarian organizations in Kenya. Specifically, supply chain integration were established to influence cost, timeliness, quality, service delivery and flexibility of Kenyan Humanitarian Organizations. It is recommended that Supplier Integration, client integration and internal integration be largely adopted by the Humanitarian Organizations as they have been established to influence Sustainable Competitive Advantage of Kenyan Humanitarian Organizations. Forthcoming studies may focus on integrating supply chain and performance or responsiveness of Kenyan Humanitarian organizations.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The current business setting is a competitive one and thus forces firms to focus more on delivery of value to customers like never before (Anatan, 2019). As a result of the said competitiveness, several changes need to be implemented and as organizations focus on these changes, more valuable products are produced (Sukati, Hamid, Baharun, Alifiah & Anuar, 2018). Production of valuable products makes supply chains more responsive thus improving their competitiveness. The bearing of supply chain integration on competitiveness in organizations is a key determinant of organizational performance (Li, 2019). Lysons and Farrington (2016) note that achievement of efficiency and effectiveness in supply chain (SC) integration is in its own a performance strategy that does not only allow an organization to have improved performance but also positions an organization at a better sustainable competitive advantage as opposed to its competitors in the free market world.

The key goal of integration in a supply network is to develop links with a firm's stakeholders who include suppliers, customers and other intermediaries through integration of their functions, locations, relationships, processes and activities (Anatan, 2019). By doing so, when effectively and efficiently integrated, a supply chain puts an organization at a sustainable competitive advantage as opposed to its competitors. This is made possible through better prices for its products and services, reduced lead time, increased quality, innovation in production and delivery etc. Milkrun (2019) also argues supply chain integration is largely facilitated by technological advancements and that it is very crucial in influencing organizational performance in the current global competitive business environment. Therefore, integration in supply chain represents a shift from the traditional relationship towards more strategic relationships such as partnerships and

alliances. According to Ndambuki (2017), sustainable competitive advantage and supply chain integration are perceived as an ongoing process of bringing together means and needs through learning.

1.1.1 Supply Chain Integration

The idea of supply chain integration (SCI), which was established in the 21st century in supply chain management (SCM), has gained popularity among managers in organizations due to its potential to influence firms' competitive advantage (Woods, 2019). Supply chain integration, as defined by the Council of Supply Chain Management Professionals (CSCMP, 2015), is the integration in a strategic sense of inhouse and external actions of the organization and further entails the evaluation on the degree to which partners in the integration process work together in order to deliver results that benefit all of them. An entity may engage strategically with various partners so as to achieve effective and efficient management of its internal and external process in order to attain smooth flow of finance, goods, information, services, risks and decisions through its supply chain. This approach is known as supply chain integration (Rakhman Angappa, Shams, Rahman & Subramanian, 2016).

A recommendation by the CSCMP (2015) indicates that integration in supply chains can be evaluated in many ways including sharing of information, teamwork, partnerships, trust, exchange of technology among partners and a shift from the focus on management of disjointed activities to management of integrated processes. Abdi (2016) also asserts that the players or network of entities in a supply chain can proceed with integration by focusing on any of the three avenues: inhouse integration, supply base integration and end user integration. Woods (2019), while supporting the need for integration, reveals that this activity has a significant impact on business

operational efficiency and competitiveness. Woods (2019) further asserts that a promptly integrated supply chain contributes to the socioeconomic advancement and long-term viability of supply chain businesses.

1.1.2 Sustainable Competitive Advantage

Competitive edge in sustainability is a broad term applied across all the sectors of the economy by various organizations be they in the private, public or NGOs. It is viewed as the only way through which organizations occupy a superior position than the average rivals in the market (Barney, 2018). The concept of SCA has been applied by various entities in ensuring that they carry out their activities with a lot of ease and achieve the best results using the available resources without overexploiting them, while taking care of the future performance (Zhou & Benton, 2017).

Due to the importance and evolution of SCA in the last quarter century, many definitions of the concept have been coined across the various fields where it is applied. In the humanitarian field, SCA is considered as the capacity of a humanitarian organization to ascend to occupy a reputable position in the sector as well as perform better than similar firms on the principal goal, by meeting the current objectives with ease and at reasonable costs with the allocated resources while taking care of the future trends for future generations (Twin, 2019). According to Odira (2018), the ability of an institution or organization to provide its services at a relatively low cost, and ensure that the services are relatively better than its rivals in the same area of operation while taking care of the future trend of services, is what can be termed as competitive advantage. In the humanitarian organization, to cater for the capacity to meet the requirements of susceptible groups currently by effectively and efficiently using the available resources while taking care of the future generations

can be said to be sustainable competitive advantage. A humanitarian organization's competitive advantage is sustainable if competitors are unable to imitate the source of the advantage or if no one conceives of a better alternative (Barney, 2018).

The best way to measure competitive advantage among humanitarian organizations would be a focus on delivery of service. According to the NGO Council (2012), services are economic activities that are intangible, cannot be kept, and do not result in ownership. It comprises the administration of supplier relationships, as well as the exchange of information, assets of any kind and knowledge. According to Okongwu et al. (2018), an organization's sustainable competitive advantage can be increased by integrating service supply chains in order to improve delivery of services and productivity. In humanitarian organizations, SCA is evaluated by foremost establishing the responding time that is a crucial component of delivering service. However, several factors, such as procurement and delivery techniques, supplier location, preferred mode of transportation, safety and politics make a significant contribution to response time. Second, adaptability gauges an organization's capacity to cope with varying calamities of varying scales and durations (Odira, 2018). Also, the count of saved lives, the qualifications and quantity of supply workers (Twin, 2019)) and finally, utilizing resource, which shows the extent of SC efficiency and allows the entity to precisely project the necessary funding for specific missions (Milkrun, 2019).

1.1.3 Humanitarian Organizations in Kenya

According to OCHA (2018), humanitarian organizations are non-governmental organizations that provide logistic and material assistance to groups that require quick support awaiting more comprehensive and lasting help from government and non-governmental institutions. These

organizations are not for profit and their services are not charged. The organizations are normally international in nature with big financial muscles and operate in more than one country with much of their funding coming from foreign countries. Despite the fact that there are some local humanitarian organizations in Kenya, majority of the well-established organizations are international with agencies in the country (Norwegian Refugee Council, 2019). The basic goal of support provided by humanitarian agencies is saving lives, ease suffering and uphold the dignity of the human person (Minear, 2017).

There are different types of natural and artificial calamities that are prevalent in the Kenyan environment (Odira, 2018). A natural calamity is considered as a hostile occurrence which emanates from changes in natural processes such as climate, weather and geologic processes (Bankoff, 2018). The major natural disasters prevalent in Kenya include: drought, floods, diseases outbreak, landslides, lightening/thunderstorms, wild fires and strong winds (OCHA, 2019). On the other hand, man-made disasters can be defined as hazards caused by human action or inaction. They include wars, conflicts between communities, terrorism, environmental degradation due to waste disposal, civil disorder, mass killing, collapse of buildings poorly done, road accidents, industrial fires etc. According to Relief International (2019), there is evidence of increasing intensity of natural calamities. Due to climate change and environmental degradation, natural catastrophes like flooding and drought have become more frequent, intense, and long-lasting in recent years (RI, 2019).

As per the Relief Web (2020), there are a number of charitable entities in Kenya offering various types of support to vulnerable people like the hungry and those affected by extreme hazards. According to the report, Red Crescent Societies, UN, Action Against Hunger, and the Worldwide Federations Red Cross entails the examples of relief organizations. These organizations are

financed by local and international donations from both government and non-governmental sources either in cash or in kind. WFP (2019) has outlined dual core principles that steers the operations of humanitarian entities. The foremost principle outlines that the affected ones at the centre of battle and catastrophe deserve help, while the second principle outlines that all the needed precautions are deployed in order to prevent or minimize suffering of the affected people. This study focuses on all humanitarian organizations in Kenya as indicated in appendix iii of this research.

1.2 Research Problem

Effective and efficient supply chain integration has a number of benefits to humanitarian organizations just like any other organization. One of the major benefits organizations stand to achieve from effective and efficient supply chain integration is sustainable competitive advantage over the competitors. Due to the strategic position SCI holds in an organization, a number of studies have examined on the role it plays. From the global perspective, Sukati et al (2018) did a study in Malaysia that focused on SCI and competitive advantage of organizations. The study assessed the impact of SCI on firms' competitive advantage. The results indicated that SCI gives an organization a competitive advantage against its competitors; making it a very crucial subject that needs to be researched on. This is also exemplified by Amin, Noorliza and Wilawan (2018) who researched on the impact of Integrating Supply Chain and the performance of entities in a Humanitarian Context in Malaysia. Results exhibited that integration of the supply chain significantly influences the performance of humanitarian entities in Malaysia. The results also revealed that SCI gives humanitarian entities a competitive advantage over others as indicated by the ease of services delivery and attraction of more funding.

Across Africa, a number of studies have indicated that SCM and integration influences the sustainable competitive advantage of organizations. However, SCM and integration in the humanitarian entities is very complex and needs to be effectively comprehended in Africa. This is due to the fact that most Non-profit organizations and humanitarian agencies do not have their funds and systems of goods and services flow, but borrow from parent organizations. Majority of these parent organizations are found in the developed countries in the west that have tough (global standards) rules and measures of operations (UNOCHA, 2019). Despite its importance, the humanitarian sector in Africa hasn't attracted intense studies as opposed to other sectors such as manufacturing firms (CLM, 2017). For example, Alie and Frank (2019) did a study on SCI for Regional Firm Performance Improvement in Ethiopia and found out that effective and efficient SCI leads to enhanced firm performance. Abdi (2016) found out that SCI is a fundamental strategy of effective organizational performance in the manufacturing industry in Kenya. Mungatia (2016) examined the effectiveness of SCM strategy in managing disaster of World Vision Kenya. In the paper, Mungatia (2016) asserts that SCM has an influence on the performance of humanitarian organizations. This means that very little research has focused on effective and efficient supply chain integration and linked it with the sustainable competitive advantage of humanitarian organization in the country; a reason as to why this current study is being undertaken.

Noting that there are very few studies that have focused on the humanitarian organizations, this study was undertaken so as to provide more knowledge in relation to the competitiveness of the humanitarian organizations in the country. In addition, the fact that the number of disasters is increasing and there is need to fill in the basic needs gaps such as food, shelter, education and health services made this research timely. The study was undertaken to examine the level of operation of the humanitarian aid organizations in the country together with the role SCI plays in

positioning them at a sustainable competitive advantage. Therefore, this study examined the impact of supply chain integration on sustainable competitive advantage of Kenyan humanitarian organizations. It was worth noting that there was no similar documented study; meaning that this study brought new knowledge on the topic under investigation. The study was thus guided by the subsequent questions; what is the adoption extent of supply chain integration by humanitarian organizations in Kenya? and what is the influence of supply chain integration on sustainable competitive advantage of humanitarian organizations in Kenya?

1.3 Research Objectives

The study sought to achieve the following specific objectives:

- i. To establish the extent to which supply chain integration was adopted by humanitarian organizations in Kenya.
- ii. To find out how supply chain integration influences sustainable competitive advantage of humanitarian organizations in Kenya.

1.4 Value of the Study

This study shall be very useful to future researchers, scholars and other bodies that will be interested in exploring the area of SCI, competitive advantage and general organizational performance in the humanitarian sector. This study shall avail the true picture of SCI of Kenyan humanitarian entities. It shall show the level to which SCI influences humanitarian organizations' competitiveness and general performance. Future students, researchers and other bodies can use this document as reference material during their literature review and for those relying on secondary data for reporting, they can rely on the data collected by this research work.

The study is also expected to benefit the national government, county government, NGO's and other donor agencies or development partners in Kenya. The data from this study will be used by these governments and partners to build policies and programmes, particularly in relation to supply chain integration best practices in humanitarian organisations. Such regulations can speed up the time it takes for humanitarian organisations to respond to disasters and provide aid when they are properly enforced. These institutions will gain from enhanced sustainable competitiveness.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This segment outlined the various documented writings in relation to supply chain integration and competitive advantage of organizations more specifically humanitarian organizations. This took consideration from the global context, the regional case and finally the local cases. This was guided by the theoretical framework, supply chain integration dimensions, sustainable competitive advantage, Empirical Literature and conceptualization.

2.2 Theoretical Framework

This study was guided by the following theories: Transaction Cost Theory, Systems, Contingency and Resource Based View Theories.

2.2.1 The Theory of transaction cost

The transaction cost hypothesis was created by an economist named Oliver Williamson and has since served as the cornerstone for strategic management and organizational performance (Pessali, 2016). The cost of supplying products through the market as opposed to having it provided internally is referred to as the transaction cost. A few concerns are addressed by this theory, such as why the existence of manufacturing companies (i.e. to reduce transportation costs), ways that companies identify their limits and how to manage operations. Müller (2016) claims that the transaction cost theory was initially developed to aid in regulating the efficiency in producing things at a reduced cost to ensure low pricing to customers.

When considered critically, humanitarian organizations must provide the proper quality of commodities and property to those who are affected and reward the bidder who offers the lowest price. Supply chain integration necessitates full connection between all parties involved in facilitating the efficient and low-cost disbursement of items from inception to the final consumer (Schmitz, 2016). The total cost of ownership for manufacturing logistics, which comprises the acquisition price, preservation cost, storing cost, distribution cost, servicing cost, and cost of processing, was thus be based on the transaction cost economics theory.

The heads of distribution ought to judiciously weigh the tradeoff amongst these charges since all of them will either surge or decrease the logistical cost that humanitarian organizations experience when shipping supplies from upstream level to the final client. To guarantee that the integrated logistics effort is successful, it is also necessary to coordinate all the steps taken to get the product to the company. For the humanitarian businesses, this strategy is essential for supply chain integration. Essentially, the cost associated with logistics operations, which has an impact on client's satisfaction and can even alter customers' impressions and loyalty to the company, will have an impact on the logistics performance in the firms, giving them an edge (Pessali, 2016).

2.2.2 Systems Theory

Baven (2016) claims that Ludwig von Bertalanffy made a contributed significantly to the upcoming of systems theory, particularly in the 1950s. The majority of Bertalanffy's contributions to scientific technique came from the perspectives of physics and biology. Since the 1970s, systems theory has dominated the field of explanation for the structure and operation of organizational supply chains. The systems approach basically contends that an occurrence is perceived as a whole rather than just the sum of its component elements (Nikla, 2013). The

emphasis is on linking the pieces so as to comprehend the firm's functions and results (Lavassani, 2016). A system is made up of subsystems that interplay and interdepend their progress that is geared on balancing of a greater system. It also sees the company as continually engaging with its surroundings, which are made up of a network of interactions between agents, shareholders and other outside influences (Lindsay, 2013).

According to Baven (2016), the systems model in supply chain integration combines different elements of complex supply chains to create a mini-system which becomes a part of a broader system of the chain's networks. Supply chains and their administration in humanitarian organizations can also be decoupled from the complexity of the real world by using general systems theory. A greater fathoming of the dynamics of the SC and the identification of interdependencies between system constituents can help to improve the how to coordinate, plan and execute functions that impacts the humanitarian SC. Additionally, it can assist in streamlining the relationships between system components so that values produced by SC are easier to interpret and analyse.

2.2.3 Contingency Theory

Contingency theory, according to Luthans (2011), is an organizational theory that maintains there is no ideal technique of running an entity, organizing a group, or making choices. Rather, the suitable course of action relies on the internal and exterior surroundings. When the situation calls for it, a contingent leader successfully applies their own style of leadership. According to Jeong et al. (2012)'s study on its principles, the contingency model argues that different solutions may be successful depending on the situation. Rather than promoting organizational management

principles that can be applied in all situations, the theory aims to show that different situations call for different organizational structures (Baranyi, 2001).

A variety of factors, such as size, environment and technology, have an impact on organizations. The expansion of a firm's particular structures and processes is the result of these variables. The organization will perform worse when the contingent factors and the structure are out of sync (McGovern & Earl, 2001). According to Robin and Barwell (2007), if a business wishes to enhance SCP, it ought to alter its traits and arrange its SC drivers to produce an effective and receptive supply chain. According to Pratono (2016), a variety of environmental, strategic, human and operational variables will likely be linked to efficient supply chain integration. A match between a certain SCI and the strategic and ecological factors is required for efficiency and effectiveness (Christopher, 2011).

2.2.4 Resource Dependency Theory

This model was first developed in 1978 by Pfeffer and Salancik and aiming at illuminating precisely how auxiliary resources are employed during the conversion process and how the disbursement of goods influenced organizational processes. This theory's core finding is that companies bank on resources whose source is the ecology consisting of several other entities. The main premise of this theory is to determine whether or not organizations were able to maintain their existence by reducing any uncertain situations, reliance, and classifying businesses as open systems that are dependent on environmental changes (Eikenberry et al., 2014).

Administrators of the SC may, however, limit these ecological concerns or reliance by enacting a number of steps, with the idea of power being the key one. As described by Hillman et al. (2009), these measures may include taking into account mergers and acquisitions as well as partnerships,

forming and organizing the board, and executive successions or takeovers as opposed activities. Additionally, businesses can profit from their associations with their clients and vendors (Slowinsket et al., 2009).

This theory provides an outline on how a firm's SC activities may minimize the implausibility, which results in a supply market that is quite steady (Scott, 2013). The resource dependency theory makes the assumption that buyers and sellers are connected in a network that has been sparked by resource dependence and by relationships that have been sparked by the interchange of already acquired resources as well as by the creation of novel resources and prospects (Hillman et al., 2009).

This theory also supports outsourcing as a practice as one of the practices covered in this study. Due to the fact that businesses' skills vary, outsourcing enables them to acquire additional resources they require but do not already have (Vincent & Delke 2015). The theory is important in the study basically due to its ability to place humanitarian organizations at a competitive advantage since a company's ability to obtain, alter and exploit raw materials faster than competitors can be fundamental to accomplishments.

2.3 Supply Chain Integration

According to Adam (2019) integration of a supply chain relates to the form of collaboration between the purchasing firm and the suppliers with the aim of coming up with valuable benefit for both parties. Integration gives rise to strong partnerships that have the ability to enhance numerous facets of a value chain like delivery of service, quality as well as bottom line for all the stakeholders in a supply chain. According to this description, SCI encompasses three important facets:

suppliers, internal, and clients (Flynn, Huo & Zhao, 2010). Therefore in this study, SCI was operationalized by supplier integration, internal integration and customer integration.

2.3.1 Supplier Integration

Supplier integration refers to the link that exists upstream between a company and its suppliers. They work hand in hand to provide technical, operational, and economic information and to give suppliers a chance to influence decisions (Bayraktar et al., 2019). As a result of this communication and interaction, suppliers are better informed about the parts they provide to the businesses. Production schedules, demand projections, and stock levels are all disclosed. The purpose of supplier integration is often to make the most of the operational and strategic strengths of those involved in the supply chain (Zhou & Benton, 2017).

According to Solakivi (2018), sharing of information and technology, mutual trust, long-term contracts, and investment in the assets of suppliers are the main characteristics of supplier integration. It also addresses the sharing of profits and risks as well as suppliers' participation in the first stages of product design. Because it increases the commitment levels among the numerous personnel within the SC, lowers transaction costs, and lessens party battles, trust is crucial in the existent relationship among the organization and its vendors (Sanders, 2017). Distributing information results in heightened product and production requirements, as well as enhance cost structure (Ruey (2018).

2.3.2 Internal Integration

According to Drechsel (2018), internal integration refers to the interaction of diverse entity's functions through consistent communicate, cooperating and collaborating that unites all of the

functional components to a solitary one. According to Francois (2019), data linking and coordination among multiple organisational roles or departments improves access to inventories, catalogs for storing critical daily data, and computerised system integration of processes. (Abdifatah, 2017). The basis for external integration is internal integration. Internal integration makes ensuring that parties involved in supply chains are able to work together in a way that allows them to understand the customers' genuine needs and receive information in a timely manner. Aligning internal procedures and departments within an organization is the initial stage in SCI, in accordance with Chan et al. (2019). The first step toward cost reduction, increased efficiency and effectiveness, and the requirement to properly address consumer needs is internal integration.

According to Cao et al. (2017), internal integration is carried out across all departments, starting with material receipt and ending with distribution. In order to satisfy customer needs, it entails integrating internal operations across manufacturer-controlled departments. This can be accomplished by the way a company's functions collaborate and are structured to meet the needs of the client. Production, marketing, logistics, marketing, sales, procurement, and distribution are the middle function departments that are involved (Barratt, 2017). Together, the functions increase overall performance and promote efficiency. According to Beth et al. (2016), cooperative planning, information sharing, functionally coordinated teams, and cooperation are some of the crucial components needed to guarantee that goods and services are delivered on time and satisfy customer needs.

2.3.3 Customer Integration.

As noted by Okongwu, Burkhart, and Moncef (2018), integrating with clients strongly depends on getting info about the clients with their purchasing behaviour and configurations, preferences for

various goods and capacity to purchase specific products. For comprehensive decision-making through the sales or production procedures, all of this information is essential. A company that actively communicates with its clients is better positioned to quickly and efficiently address their demands, improving order fulfillment and visibility (Min & Mentzer, 2017). According to Lee and Farrington (2017), customer integration encompasses a variety of activities such as integrated problem solving, direct customer interaction, efficient management of clients criticisms, grooming and establishing long-term collaborations with clients, and implementation of their focus inputs to increase their satisfaction.

Integrating with customers guarantees a smooth flow of items from a company to her beneficiaries. Information on demand is shared, and customers are involved in the creation of new items. (Beth et al., 2016). Producers can achieve customer satisfaction by combining the information they have obtained with the needs of their diverse clientele. Customer integration establishes a connection with the customers, allowing for a clear understanding of their preferences. Customer integration leads to high response to customer demands, reduced cycle time, transaction visibility, reduction in operational cost and increased customer service levels (Barratt, 2017). Cao et al. (2017) notes that client integration boosts reactivity to clients' needs by systematically and satisfaction levels.

2.4 Competitive Advantage

Twin (2019) considers competitive advantage to be the conditions that facilitate creation of a product by a nation or firm at a relatively lower cost of production. He further argues that the said conditions make it possible for the firm or nation to perform better than others in the same category in revenues from sales and profitability. Examples of these conditions that are considered to

provide competitive advantage include a firm's distribution network, branding, product quality, customer service, costs involved intellectual property among others.

Conversely, in managing SC, its effectiveness can be seen as a competitive advantage. Supply chain performance, according to Zhang and Okorafo (2015), is the firm's capacity to lower logistical costs by guaranteeing delivery of the desired quantity of products to the right destinations and more significantly at the right moment and locations. Performance of the whole value chain network, flexibility, consistency, responsiveness and consumer satisfaction may be affected if focus is placed on only a specific component and not the entire supply chain in totality (Zhou & Benton, 2017). There are a number of measures that have been devised and meant to rate supply chain activities, and selecting the most suitable gauging instrument is not a simple task. Creation of a largely realistic SC model such as SCOR is necessary if the performance of the SC has to be effectively monitored. According to Supply Chain Council (2015), the SCOR is seen as an equilibrium approach of measuring competitiveness as it considers 5 crucial supply chain processes: scheduling, sourcing, manufacturing, delivering, and returning.

By examining the services provided, it is possible to identify competitive advantage in humanitarian organizations. A sort of commercial action that is intangible, un-stored, and may not lead to possession is referred to as a service, according to NGO Council (2012). It encompasses the creation and maintenance of supplier connections as well as the exchange of knowledge, assets of all kinds, and information. The integration of service supply chains can be improved in any firm and may result in efficiency in production and service delivery.

Although there are numerous elements that affect response time, inclusive of procurement and delivering tactics, vendor location, preferred mode of transportation, safety, and politics, it is

initially determined in humanitarian organizations as a key component of service delivery. Second, adaptability assesses an organization's capacity to react to crises of various sizes and in varied amounts of time. The third factor is the amount of livelihood saved, followed by the experiences and quantity of vendor staff (Beamon, 1999) and finally utilizing resource that shows the degree of supply chain efficiency and helps the organization to precisely project the financing needs for various tasks (Bisau, 2010).

2.5 Supply Chain Integration and Competitive Advantage of Organization

Supply chain integration establishment is a gradual process. The traditional strategy is to start modest, gather feedback, and then make more modifications. This is a continuous process that yields advancements on top of earlier advancements. It is possible to make significant progress rapidly, and the ongoing feedback keeps things moving in the correct way (Cooper, Lambert & Pagh, 2017). SCI is essential for organizations in the twenty-first century, say Cigolini, Cozzi, and Perona (2018). It can help to solve issues like high inventory costs, overproduction and underproduction, production snags brought on by a absence of procured items or components, unreliable delivery or component quality, subpar supplier service, and high transportation costs due to a propensity for expedited shipping.

When executed properly and efficiently, SCI has four advantages for a firm (Fawcett & Magnan, 2018). Flexibility, better inventory control, lower costs, and improved suppliers are some of the advantages. As per Flynn et al., (2018), SCI provides four advantages: Flexibility, which is an interconnected supply chain, improves the capacity to react to quick alterations in the marketplace. This is corroborated by a common SC interest in doing things appropriately the principal time: The ability to properly balance levels of inventory with consumer demand has led to this: minimal

spending, the costs for monitoring and inspecting quality, administrative tasks, and acquisition will all decline. As a result of enhanced forecasting and optimizing load, costs of moving items will also be lowered: Finally, the vendors will be superior and fewer as the entity will possess higher faith in the said suppliers' capacity to fulfill orders on schedule and their ability to give quality.

In their study, Li et al. (2019), confirmed that SCI is associated to competitive gain of an organization, and that competitive advantage affects the performance of the organization. They continue to demonstrate how efficient supply chain management (SCM) and integration are now potentially useful methods for obtaining competitive advantage and enhancing organizational performance because supply chains are now the competitors, not businesses, in today's market. Additionally, enhanced competitive edge and improved entity's performance may emanate from higher degree of SCM practice.

There is broad agreement among experts, including Kiplagat (2017), Adam and Woods (2019), that there are a variety of supply chain integration components that contribute to an entity's competitive advantage and therefore affecting performance. These studies claim that SCI components include internal firm integration, firm-supplier integration and firm-customer integration. The three work together to give a firm a competitive edge, which can be assessed by looking at factors like pricing, quality, reliability of delivery, speed to market, and product innovation. Organizational performance is also related to factors like asset base, market share, and profitability.

2.6 Conceptual Framework

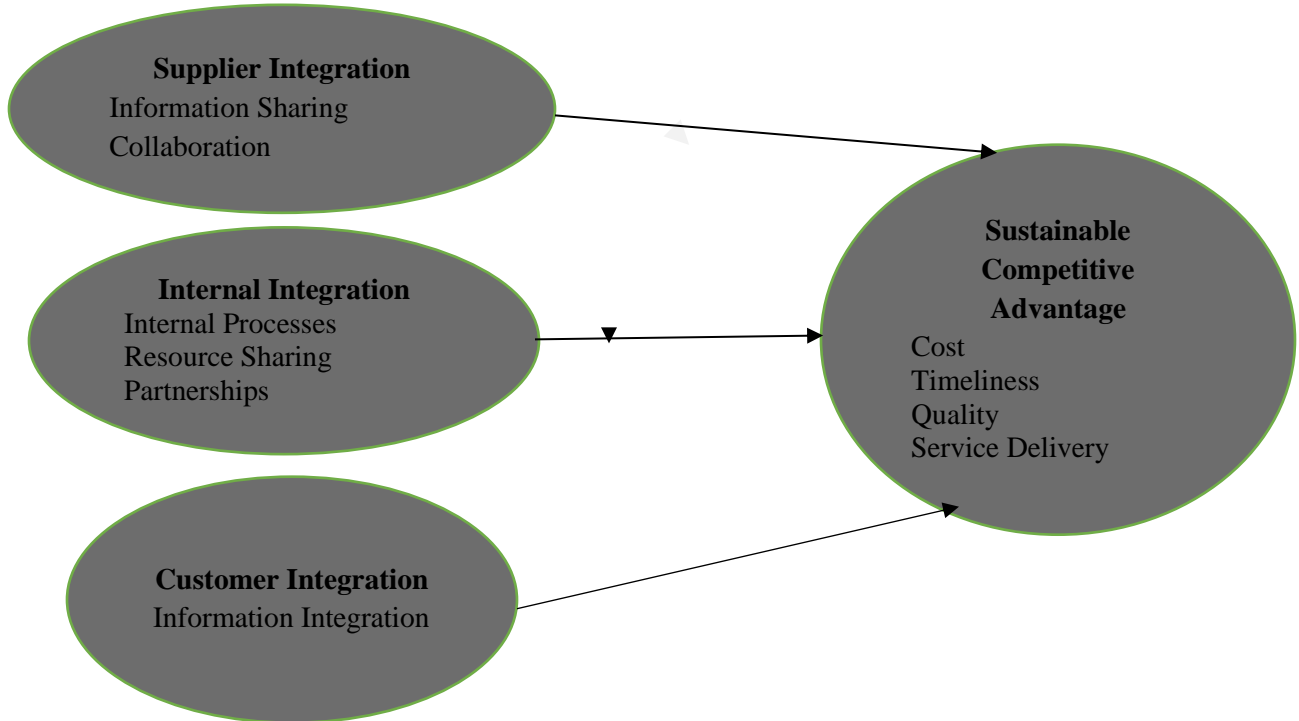
The following outlines the interaction amongst the variables in the study. The independent Variable was SCI which was measured by supplier, internal and customer integration. The

dependent variable was competitive advantage, measured by cost, timeliness, quality and delivery of service as illustrated.

Figure 2. 1 Conceptual Framework

Independent Variable

Dependent Variable



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter provided a detailed description of the methods that the researcher applied in carrying out the research. The research methodology brought out the plan, structure and strategy aimed at obtaining answers to research questions. The chapter will go over the study's chosen design in detail, set out the target audience, describe how data will be gathered, identify the targeted respondents, and ultimately explain how each objective will be analysed.

The study's design was used in the identification of the required procedures and logistical arrangements of the study. Target population section identified the individuals, objects or cases with common feature that took part in the study. Data collection instruments and procedures were also identified. A method for analyzing the information gathered was also be identified.

3.2 Research Design

This study adopted a descriptive survey research design. As outlined by Kothari (2004), the design entails systematic collection of data in a standardized form from the population of focus. This research design was highly suitable to the current study largely since it sought to acquire information that best fits the existing phenomenon using the attitudes, perceptions and values of research. This design was preferred for this study because it was considered to deliver a precise and an effective representation of the variables that are core to the study question. Adam and Woods (2019) opines the importance of a research design is to facilitate gathering of maximum data at the lowest possible cost. This can be reflected in a study where minimal resources are utilized during the study as well as achievement of smooth research operations. It also fully

described the status of SCI and competitive advantage of Kenyan humanitarian organizations. The same design was adopted in Nkirote (2017) that focused on supply chain integration at the Kenya Medical Supplies Authority.

3.3 Population

Based on Polit and Beck (2004), the aggregation of scheduled cases in a certain set of criteria that and is fully designated is termed as the population. Therefore, the target population was the point of reference from whereby the researcher generalized from the entire cases. Therefore, the study used all the operational humanitarian entities in Kenya. These humanitarian organizations must have operated in Kenya for at least five years operating in disaster situations via evacuating and providing emergency provisions. The selection of 5 years helped the researcher in capturing the experiences of respondents before and after covid-19 pandemic. Based on the Relief web (2020), there is 41 humanitarian organizations (see appendix iii). Considering the minimal and practicable population, a Census was carried out. In this case, the study used a population census whereby the top managers in the supply chain section were considered from each of the 41 humanitarian organizations.

3.4 Data Collection

In research either primary or secondary data may be applied. Information considered as primary represents data collected or gathered directly from the respondents and it therefore represents unaltered position on a particular phenomenon as perceived or understood by the respondents at that particular point in time. Primary data being an illustration of first-hand-experience is normally not published and is considered highly reliable, objective and authentic. On the contrary, secondary data is data obtained from other sources and not directly from the research respondents. Whereas

primary data has not been altered, secondary data is normally processed data and contained in various forms including print and electronic media. In this study, variables under study do not have secondary information. Therefore, questionnaire was deemed appropriate.

A questionnaire is an instrument for gathering self-report information. Most questionnaires are self-administered and thereby they bring out the respondents view in clearly. The respondents responded to a series of questions contained in a structured questionnaire developed and pretested prior to the actual study (Polit & Beck, 2010). In this research the data collection tool was a five-point Likert Scale type of questions which were mainly closed ended. The questionnaires were made of 3 sections. Section (I) sought to gather basic demographic of participants information and the humanitarian organizations, Section (II) entailed the adoption extent of Supply Chain Integration with section III containing questions related to supply chain integration components and their impacts on competitive advantage of these humanitarian organizations.

Permission was sought from the respective humanitarian organizations to conduct publishable research. This made information gathering official and easy. The study targeted 41 Humanitarian Organizations in Kenya whereby two questionnaires were administered per the Organization. The general participants were 82. Questionnaires were sent to the emails of the selected supply chain or Procurement managers from the 41 humanitarian organizations.

3.5 Data Analysis

The questionnaires were collected, checked and coded by a data management expert. They were then keyed into the computer SPSS software. Descriptive statistics was utilized in determining the adoption extent of SCI employed by these humanitarian organizations. Regression analysis was

used to establish the association between the employed SCI techniques and sustainable competitive advantage of these humanitarian organizations. The model took the subsequent format:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where: Y = Sustainable Competitive advantage;

$\beta_1 \dots \beta_3$ = Regressions Coefficients associated with each independent variable;

X_1 = Supplier Integration;

X_2 = Customer Integration

X_3 = Internal Integration

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS

4.1 Introduction

The study's objective was to determine how supply chain integration influences sustainable competitive advantage of Kenyan Humanitarian organizations. The chapter discusses the outcome of the paper as per objectives.

4.2 Response Rate

The research targeted 41 Humanitarian Organizations in Kenya whereby two questionnaires were administered per the Organization. The total number of respondents was 82. The researcher was able to gather 74 complete questionnaires, or 90.24%, which was deemed a sufficient response rate for data analysis. The result is as illustrated.

Table 4. 1 Rate of Response

Response	Frequency	Percent
Returned questionnaires	74	90.24
Unreturned questionnaires	8	9.76
Total	82	100

Source: Study Data (2023)

4.3 General information

The demographic information was gathered from the Humanitarian Organizations in Kenya to get a view on the study's participants and the Organization itself. This entailed the Gender, Age, Academic Qualifications and the time that the participants had served in the organizations.

4.3.1 Gender of respondents

The paper aimed at establishing the participant's gender. Table 4.2 illustrates that 48.6% of the participants were masculine while the remaining 51.4% were feminine.

Table 4. 2 Respondent's Gender

Gender	Frequency	Percentage
Male	36	48.6
Female	38	51.4
Total	74	100

Source: Study Data (2023)

4.3.2 Age Distribution

The study aimed at finding out the age distribution of the respondents. Table 4.3 shows that 12.2% of those who provided the data were between the age of 20 to 25, 18.9% were between the age of 26 to 30 years, 39.2% were between 30 to 40 years with the remaining 29.7% being above 40 years. The outcome affirms that majority of those who participated in the survey, represented by 68.9%, were above 30 years old. This indicates that views obtained were represented from all the age group.

Table 4. 3 Age Distribution

Age	Frequency	Percentage
20-25 years	9	12.2
26-30 years	14	18.9
30-40 years	29	39.2
Above 40 Years	22	29.7
Total	74	100

Source: Study Data (2023)

4.3.3 Academic Qualifications

The research aimed at determining the highest academic level that the participants had obtained. According to Table 4.4, 14.9% of people had a diploma as their highest education level, trailed by 47.3% who had a bachelor's degree and 37.8% who had a postgraduate degree. Since the majority of participants (85.1%) were graduates or postgraduates, they were well-educated and able to contribute to the study's findings. The study's participants were highly educated and could answer the questions easily since they possessed at least held a diploma.

Table 4. 4 Academic Qualifications

Academic	Frequency	Percentage
Diploma	11	14.9
Graduate level	35	47.3
Post Graduate Level	28	37.8
Total	74	100

Source: Study Data (2023)

4.3.4 Length of service

The study aimed at examining how long the study's participants held each position.

Table 4. 5 Length of service

Length of service	Frequency	Percentage
1-5 years	28	37.8
6-10 years	21	28.4
11-15 years	11	14.9
16-20 years	8	10.8
Above 20 years	6	8.1
Total	74	100

Source: Study Data (2023)

Table 4.5 shows that 37.8% of the respondents had served for a period not surpassing five years, 28.4%, for six to ten yrs, 14.9% for 11 to 15 yrs, 10.8% for sixteen to twenty years with the remaining 8.1% having served for twenty years and above in their Humanitarian Organizations. This implies that a greater proportion of research participants had worked for an extended period in the company to be qualified to submit trustworthy data.

4.4 Supply Chain Integration

Objective one aimed at examining the adoption extent of SCI by Kenyan Humanitarian Organizations and the outcome are as presented.

4.4.1 Supplier Integration

The study determined to establish the extent that the Humanitarian Organizations in Kenya had adopted Supplier Integration. From table 4.6, the organisation focusing on long term collaboration with suppliers (M=3.79, SD=1.20), creating advance awareness with the suppliers about changing needs (M=3.69, SD=1.12), the organization focusing on quality assurance from suppliers (M=4.00, SD=0.94) and creating and maintaining supplier connections (M=3.89, SD=0.97) were adopted to a great extent by the Humanitarian Organisations in Kenya. Suppliers being involved when developing specifications of a product (M=3.52, SD=1.13), there being adequate knowledge and information sharing between the organisation and vendors (M=3.78, SD=1.01), having timely delivery of orders using efficient ordering systems (M=3.82, SD=0.97) as well as the achievement of Organisational packaging and branding customisation with suppliers (M=3.85, SD=1.02) were all largely adopted as well. The gains as a consequence of collaboration with suppliers being equally shared (M=3.54, SD=1.12) and the Organization occasionally carrying out trainings to educate suppliers (Mean=3.85, Deviation=1.16) were largely adopted while active participation of

suppliers in organizational decision-making processes (M=3.09, SD=1.21) and achievement of continuous information programs (M=3.43, SD=1.11) were moderately adopted by the Kenyan Humanitarian Organizations as per their respective measures. This is presented in Table 4.6.

Table 4. 6 Supplier Integration

Supplier Integration	Mean	Std. Deviation
The organisation focuses on long term collaboration with suppliers	3.7903	1.20296
Suppliers actively participate in important organizational decision-making processes.	3.0946	1.20693
Creating advance awareness with the suppliers about changing needs	3.6892	1.12171
The organization focuses on quality assurance from suppliers	4.0000	.93633
Creation and maintenance of supplier connections	3.8919	.97317
Suppliers are involved when developing specifications or a product	3.5270	1.13744
There is adequate knowledge and information sharing between the organisation and suppliers	3.7838	1.01050
Timely delivery of orders using efficient ordering systems	3.8243	.97022
Organisational packaging and branding customisation with suppliers have been achieved	3.8514	1.02946
The gains as a consequence of collaboration with suppliers are equally shared	3.5405	1.12493
The Organization occasionally carries out trainings to educate suppliers	3.8514	1.16593
Continuous information programs have been achieved.	3.4324	1.11135
Overall	3.6083	1.05219

Source: Study Data (2023)

4.4.2 Customer Integration

The ascertained the extent that the Kenyan Humanitarian Organizations had adopted Customer Integration. From table 4.7, The Organization maintaining direct contact with its beneficiaries (M=4.06, SD=0.89), having in place a database of potential beneficiaries and potential disaster areas (M=3.70, SD=1.01), engaging beneficiaries and works hand in hand with them for better delivery of service during the disaster (M=3.74, SD=1.07) and engaging beneficiaries through regular meetings (M=3.77, Deviation=0.92) were all largely by the Kenyan Humanitarian Organisations in. Having expansive distribution network for humanitarian supplies (M=3.72, SD=1.06), the organisation being conscious of its customer requirement (M=4.02, SD=1.02), aligning Organisational activities and processes with recipient needs (M=4.08, SD=0.90) as well as beneficiaries being encouraged to provide feedbacks (M=3.93, SD=0.88) were all largely adopted as well. Also largely adopted by the Humanitarian organizations was the organization using the feedbacks from its recipients (M=3.81, SD=0.96), the organisation having an organized processes for tackling recipients grievances (M=3.86, SD=0.99) as well as putting measures in place to ensure an efficient supply flow from the organization to its beneficiaries (M=4.05, SD=0.92).

Table 4. 7 Customer Integration

Customer Integration	Mean	Std. Deviation
The Organization retains one-on-one communication with its beneficiaries	4.0676	.89643
The Organization has in place a database of potential beneficiaries and potential disaster areas	3.7027	1.01671
The Organization engages beneficiaries and works hand in hand with them for better delivery of service during the disaster	3.7432	1.07348

Beneficiaries engagement through regular meetings	3.7703	.92968
Expansive distribution network for humanitarian supplies	3.7297	1.06369
The organisation is conscious of its customer requirement	4.0270	1.01998
Organisational activities and processes are aligned with recipient needs	4.0811	.90291
Beneficiaries are encouraged to provide feedbacks	3.9324	.88102
The organization uses the feedbacks from its recipients	3.8108	.96053
The organisation has systematic processes for handling recipients complaints	3.8649	.99759
There are measures in place to guarantee an efficient flow of supplies from the organization to its beneficiaries	4.0541	.91997
Overall	3.8454	.96363

Source: Study Data (2023)

4.4.2 Internal Integration

The research aimed at determining the adoption extent of Integrating internally by the Humanitarian Organization in Kenya. Table 4.8 shows that there being unfettered exchange of information within the organization's numerous departments was largely adopted with the means of 4.00 and SD of 0.89 and engagement of stakeholder through periodic interdepartmental meetings being commonly utilized was also largely adopted with a mean of 3.97 and SD of 0.91. Extensive information distribution inside the organisation (Mean=4.04, Deviation=0.91), attainment of Integration of data among internal functions via ERP systems (M=3.79, SD=0.99) and having is a high degree of data integration information process (Mean=4.04, Deviation=0.87) were largely adopted as viewed from the deviations and means. Having a is a visibility of processes within the organization with the means of 4.00 and SD of 0.87 as well as embracing Teamwork/ Cross functional management by the organization with the means of 4.01 and Deviation of 0.85 were both largely adopted. Conducting Periodic interdepartmental internally (M=4.06, SD=0.89),

equally sharing all the pertinent info among subdivisions of the organization (M=3.95, SD=0.94) and internally integrating data through information technology systems (Mean=4.10, Deviation=0.82) were largely adopted as evident from the deviations and means.

Table 4. 8 Internal Integration

Internal Integration	Mean	Std. Deviation
The Organization encourages free information flow of amongst its departments	4.0000	.89136
Stakeholder engagement through periodic interdepartmental meetings are commonly utilized	3.9730	.90619
Sharing of information inside the organisation is extensive	4.0405	.99917
Integration of data among internal functions is attained via ERP systems	3.7973	.99285
There is a high degree of data integration information process	4.0405	.86704
There is a visibility of processes within the organisation	4.0000	.87586
The organization values Teamwork/ Cross functional management	4.0135	.85196
Interdepartmental conferences are regularly held internally.	4.0676	.89643
Each department receives an equal share of all pertinent information.	3.9595	.94273
information technology systems is used to integrate data Internally	4.1081	.82042
Overall	4.0013	.89213

Source: Study Data (2023)

4.5 Sustainable Competitive Advantage

The paper aimed at determining the association between Supply Chain Integration and Sustainable Competitive Advantage of Kenyan Humanitarian Organizations and the outcomes are subsequently presented.

4.5.1 Supply Chain Integration and Cost

The respondents were asked to rate the level which Supply Chain Integration impacts Cost.

Table 4. 9 Supply Chain Integration and Cost

Cost	Mean	Std. Dev
Reduced transportation/logistics cost	3.9189	1.08232
Improved capacity utilization	4.0676	.89643
Aggregate purchasing	4.1486	.94626
Long agreements with suppliers	4.0676	.89643
Overall	4.0507	.95559

Source: Study Data (2023)

Table 4.9 portrays that Reduced transportation/logistics cost (M=3.92, SD=1.08) and Improved capacity utilization (M=4.06, SD=0.89) were largely influenced by the adoption of SCI. Supply Chain Integration was also found to have influenced Aggregate purchasing (M=4.15, SD=0.94) and largely impacted long agreements with vendors (Mean=4.06, Deviation=0.89) as evidenced by their respective deviations and means.

4.5.2 Supply Chain Integration and Timeliness

The participants had to provide the level that Supply Chain Integration impacts Timeliness.

Table 4. 10 Supply Chain Integration and Timeliness

Timeliness	Mean	Std. Dev
Timely delivery of emergence supplies	4.1081	.88469
Order lead time reduction	4.0135	.83573
Timely inventory replenishment	4.0270	.85964
Timely arrival at disaster scene	4.0811	.88761
Decrease in time to solve beneficiaries' complaints	4.0135	.83573
Overall	4.0486	.86068

Source: Study Data (2023)

Table 4.10 shows that timely delivery of emergence supplies (M=4.11, SD=0.88), Order lead time reduction (M=4.01, SD=0.84) and timely inventory replenishment (M=4.02, SD=0.86) were all influenced by the adoption of SCI to a large extent. Timely arrival at disaster scene and M=4.08, SD=0.89) and decrease in time to solve beneficiaries' complaints (Mean=4.01, Deviation=0.84) were influenced to a large extent as well by the adoption of supply chain integration.

4.5.3 Supply Chain Integration and Quality

The participants had to provide the level that Supply Chain Integration impacts Quality.

Table 4. 11 Supply Chain Integration and Quality

Quality	Mean	Std. Deviation
The entity meets conformance to specification	4.0405	.78407
Effective Quality control Process	4.0676	.83307
Reduction in the number of beneficiary complaints during supply of consumables	4.2297	.73181
Reduction in number of defective or stale supplies	4.0811	.88761
Enhanced Service Delivery	4.3378	.83218
Overall	4.1689	.81375

Source: Study Data (2023)

Table 4.11 illustrates that the organization meeting conformance to specification with the mean of 4.04 and dev of 0.78 and Effective Quality control Process with the mean of 4.06 and dev of 0.83 were influenced to a large extent. Reduction in the number of beneficiary complaints during supply of consumables (M =4.SD=0.73), Reduction in number of defective or stale supplies (M=4.08, SD=0.89) and Enhanced Service Delivery (Mean=4.33, Deviation=0.83) were all largely impacted by the adoption of SCI as per their deviations and means.

4.5.4 Supply Chain Integration and Flexibility and Service Delivery

The participants had to rate the level which the adoption of supply chain integration influences Flexibility and delivering of service. Table 4.12 shows the Organization's capacity to react to crises of various sizes and in varied amounts of time (M=4.00, SD=0.89) as well as Improved capacity to react to quick changes to the beneficiary requests (M=4.33, SD=0.83) were both largely impacted by the adoption of Supply Chain Integration. Reliable deliveries to beneficiaries with the mean of 4.28 and deviation of 0.79 as well as Reduction in number of complaints from beneficiaries with the mean of 4.23 and dev of 0.82 were largely influenced as well by the adoption of Supply Chain Integration.

Table 4. 12 Supply Chain Integration and Flexibility and Service Delivery

Flexibility	Mean	Std. Deviation
Organization's capacity to react to crises of various sizes and in varied amounts of time	4.0000	.72149
Improved the capacity to react to quick changes to the beneficiary requests	4.3378	.83218
Service Delivery		
Reliable deliveries to beneficiaries	4.2838	.78549
Reduced number of complaints from beneficiaries	4.2297	.82008
Overall	4.2128	.78981

Source: Study Data (2023)

4.6 Supply Chain Integration and Sustainable Competitive Advantage

The paper sought to determine the association between Supply Chain Integration and Sustainable Competitive Advantage of Kenyan Humanitarian Organizations. Data was regressed and the outcomes are subsequently presented.

4.6.1 Regression Model Summary

The study's regression model summary is shown in Table 4.13.

Table 4. 13 Regression Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
I	.872	.674	.713	.186

a. Predictor, Supply Chain Integration

b. Dependent Variable: Sustainable Competitive Advantage

Source: Study Data (2023)

As shown in table 4.13, the R^2 is 0.674 which can be translated to 67%. This means that 65% of Sustainable Competitive Advantage is accredited to Supply Chain Integration (Supplier, Customer and Internal Integration) adoption. Only 33% of the model is not accounted for due to diverse factors not covered by the research.

4.6.2 ANOVA Analysis

Table 4.14 portray that F value is 383.988 with F critical being 18.434 affirming a statistical relevant model. This is corroborated by the value of P .000 being < 5%. Thus, Supply Chain Integration (Supplier Integration, Customer Integration and Internal Integration) is a suitable predictor of Sustainable Competitive Advantage.

Table 4. 14 ANOVA Analysis of the study

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.302	3	18.434	383.988	.000 ^b
	Residual	3.360	70	.048		
	Total	58.662	73			
a. Dependent Variable: Sustainable Competitive Advantage						
b. Predictors: (Constant), Supplier Integration, Customer Integration and Internal Integration						

Source: Study Data (2023)

4.6.3 Regression coefficients

The regressed coefficients determined the value of SCI and the association between SCI and Sustainable Competitive Advantage and the findings are tabulated in 4.15.

From table 4.15, Supply Chain Integration (Supplier Integration (t=12.320, P<5%), Customer Integration (t=0.779, P<5%) and Internal Integration (t=1.536, P<5%) all possess a favorable and substantial relationship with Sustainable Competitive Advantage of Humanitarian Organizations in Kenya. This is supported by their p value which are less than 0.05 (Supplier Integration (p=0.000, P<5%), Customer Integration (t=0.039, P<5%) and Internal Integration (t=0.029, P<5%) The model illustrates that after Supplier Integration, Customer Integration and Internal Integration are constant, the resultant value of Sustainable Competitive Advantage is 2.228.

Table 4. 15 Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.228	.124		17.965	.019
	Supplier Integration	.773	.063	.773	12.320	.000
	Customer Integration	.061	.079	.070	.779	.039
	Internal Integration	.125	.081	.149	1.536	.029
a: Sustainable Competitive Advantage						

Source: Study Data (2023)

The resulting equation for linear regression is:

$$Y = 2.228 + 0.773 \text{ Supplier integration} + 0.061 \text{ Customer integration} + 0.125 \text{ Internal integration}$$

4.7 Discussion of Findings

The research was steered by two objectives, both of which were achieved. The foremost objective was to determine the level of adoption of SCI by Humanitarian Organizations in Kenya with the second seeking to examine the association between SCI and sustainable competitive advantage of Humanitarian organizations in Kenya.

On objective one, it was determined that Supplier Integration was adopted to a large extent by the Humanitarian Organization in Kenya. Supplier integration had a mean of 3.60, an indication that it was adopted to a large extent as per the Likert scale used. The result coincides with that of Bayraktar et al (2019) who determined that supplier integration is critical for the organization as entities have the ability to share information and technology, encourages mutual trust, promotes long-term contracts, and invests in the assets of suppliers. According to Solakivi (2018), supplier integration is essential for the organization because it allows entities to share information and technology, develops confidence between the parties, and results in contracts with long-lasting relations and investing in the assets of suppliers. It also makes it easier for suppliers to participate in the initial phases of designing new goods and to share risks and profits.

Internal integration was adopted to a large extent by the Kenyan Humanitarian Organization having a mean of 4.00. The outcome aligns with that of Abdifatah (2017) who affirmed that internal integration is crucial to the entity because it guarantees that parties involved in supply chains receive information in a timely manner and are able to work together to understand the real needs of the customers. Barratt (2017) adds that internal integration helps entities carry out tasks collectively to increase efficiency and boost performance.

Customer integration was largely adopted by the Kenyan Humanitarian Organization (mean = 3.8). The outcome are in tangent with that of Min and Mentzer (2017) who noted that a company that regularly communicates with its clients is well positioned to efficiently and promptly respond to their requirements, which leads to increased order fulfillment and visibility, according to. Customer integration, according to Lee and Farrington (2017), is crucial because it facilitates integrated problem solving, direct customer contact, efficient management of client's grievances, cultivating and establishing of long-term dealings with them, and implementation of their inputs to increase their satisfaction.

Objective two ascertained a positive correlation between Supply Chain Integration and Sustainable Competitive Advantage. More specifically, supplier integration was found to influence and have a relationship with sustainable competitive advantage of Kenyan Humanitarian organizations. The conclusion aligns with that of Sukati et al (2018) who majored on SCI and firms' competitiveness and the results indicated that supplier integration gives an organization a competitive advantage against its competitors. Amin, Noorliza and Wilawan (2018) exhibited that integration of the suppliers significantly influences the performance of Malaysian humanitarian entities. The study results also revealed that integrating suppliers gives humanitarian firms a competitive advantage over others as indicated by the ease of services delivery and attraction of more funding

Customer integration was found to have a relationship and to influence sustainable competitive advantage as it had a p value that did not surpass 0.05. The outcome are similar with that of Cigolini, Cozzi, and Perona (2018) who observed that integrating clients is key to an entity as it can help in solving issues like high inventory costs, overproduction and underproduction, unreliable delivery or component quality, inferior supplier service and high transportation costs due to a propensity for expedited shipping. Fawcett & Magnan, 2018) opine that integrating

customers in an entity enhances flexibility, better inventory control, lower costs, and improved relationships.

Internal integration ($p=0.02<0.05$) also influenced sustainable competitive advantage of Humanitarian organization in Kenya as its p value did not exceed 0.05. The outcome contrasts with that of Amin et al (2018) who affirmed that integrating internally is crucial to an entity but it does not enhance performance nor give an entity competitive edge. The results are however in alignment with that of Sukati et al (2018) who determined that internal integration gives organizations competitiveness.

The outcome of the research are sustained by the systems theory. A greater understanding of the dynamics of the supply chain and the identification of interdependencies between system (suppliers, internally and customers) constituents can help to improve the plans, executing and coordinating the humanitarian SC. Additionally, it can assist in streamlining the relationships between system components so that values produced by SC are easier to interpret and analyse. Integrating all the partners of the SC and ascertaining that they work together as one system is paramount in enhancing sustainable competitive advantage.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The summaries of the main outcome of the paper are discussed in this segment along with conclusions, suggestions for further research, and recommendations.

5.2 Summary of the study

The study aimed at establishing the impact of supply chain integration on sustainable competitive advantage of Kenyan Humanitarian Organizations. The objectives were to establish the level of adoption of SCI by the Humanitarian Organizations and to establish the association amongst SCI and Sustainable Competitive Advantage of Kenyan Humanitarian Organizations.

On the level of adoption of supply chain integration by Kenyan Humanitarian Organizations, the concept was operationalized in terms of supplier integration, customer integration and internal integration. On supplier integration, it was noted that the Humanitarian organization in Kenya adopted it a large extent. The humanitarian organizations attained this by focusing on long term collaboration with suppliers, Creating advance awareness with the suppliers about changing needs, the organization focusing on quality assurance from suppliers and creating and maintaining supplier connections. Suppliers were also involved when developing specifications of a product (as well as having adequate knowledge and information sharing between the organisation and suppliers. The gains as a consequence of collaboration with suppliers were equally shared with the organization occasionally carrying out trainings to educate suppliers

Customer integration was determined to have been largely adopted by the Kenyan Humanitarian organization. This was achieved by the organization maintaining direct contact with its beneficiaries, having in place a database of potential beneficiaries and potential disaster areas, engaging beneficiaries and working hand in hand with them for better delivery of service during the disaster and engaging beneficiaries through regular meetings. The organization also had expansive distribution network for humanitarian supplies, was conscious of its customer requirement, aligned organisational activities and processes with recipient needs as well as encouraging beneficiaries to provide feedbacks.

Internal integration was also largely adopted by the Humanitarian organization in Kenya. This was realized through having a seamless exchange of information within the organization's numerous departments, engaging stakeholder through periodic interdepartmental meetings being commonly utilized, having an extensive sharing of information inside the organisation and integrating data among internal functions via ERP systems. The organization also had a high degree of data integration information process, had a visibility of processes within the organization, embraced teamwork/ cross functional management and held periodic interdepartmental meetings internally. The organization also equally shared all the pertinent info among subdivisions of the organization

On establishing the association between SCI and sustainable competitive advantage, supply chain integration was established to contain a positive association and to influence sustainable competitive advantage as sustained by the p value that does not exceed 5%. Supply chain Integration was established to largely influence cost, timeliness, quality, flexibility and service delivery as posited by the participants. Supplier integration was established to influence sustainable competitive advantage of Humanitarian organizations in Kenya. Customer Integration was also found to influence sustainable competitive advantage of Humanitarian organizations in

Kenya as it had a p value not exceeding 0.05. Lastly Internal Integration had a p value of $0.02 < 0.05$ and thus was found to influence sustainable competitive advantage of Kenyan Humanitarian organizations.

5.3 Conclusions

The study concludes that supplier integration was largely adopted by the Kenyan humanitarian organization based on a 5 point likert scale used as it had a mean of 3.60/5. Customer integration had a mean of 3.85/5 and thus it is concluded that the Humanitarian organizations adopted customer integration to a large extent. Lastly, Humanitarian Organizations in Kenya largely adopted internal integration as evidenced by a mean of 4.00/5. The outcome thus determines the adoption, to a large extent, of supply chain integration by Kenyan Humanitarian organizations.

It is also concluded that all the elements of supply chain integration were found to influence sustainable competitive advantage of humanitarian organizations in Kenya. Based on the p value ($0.00 < 0.05$), supplier integration was found to have a relationship and to influence sustainable competitive advantage of Humanitarian organization. Customer integration had a p value (0.039) which was lower than 5%, an sign that customer integration influenced sustainable competitive advantage of Humanitarian organization in Kenya. Lastly, internal integration also had a p value of $0.029 < 0.05$. This infers that the internal integration influenced sustainable competitive advantage of humanitarian organizations in Kenya. As a result, it can be concluded that SCI operationalized by supplier, customer, and internal integration impacted sustainable competitive advantage operationalized by cost, timeliness, quality, flexibility, and Humanitarian Organizations' service delivery.

The findings of this study clearly demonstrate that SCI has a large and advantageous impact on the SCA of humanitarian organizations in relation to cost, timeliness, quality, flexibility, and service delivery. Thus, it is concluded that in order to improve their sustainable competitive advantage, which is demonstrated by lower operational costs, superior quality, improved timeliness, and superior service delivery, humanitarian organizations should adopt SCI (Supplier Integration, Customer Integration, and Internal Integration). The company will also be able to timely supply items and services to beneficiaries, which will result in satisfied clients and greater operational flexibility

5.4 Recommendations

Given the outcome, it is recommended that companies ought to adopt supply chain Integration as they have been established to enhance Sustainable Competitive Advantage of Kenyan Humanitarian Organizations in. It is recommended that the Kenyan Humanitarian entities should adopt supplier integration since it is critical for the organization as entities have the ability to share information and technology, encourages mutual trust, promotes long-term contracts, and invests in the assets of suppliers. It also makes it easier for suppliers to participate in designing the product and to share risks and profits. Supplier integration is crucial for enabling the organization and its vendors to work in unison and share technical, operational, and economical information and to give them a voice in decision-making. As a result of this communication and interaction, suppliers are better informed about the parts they provide to the businesses. The company should implement supplier integration because it is crucial for the organization's ability to exchange information and technology, builds confidence between the parties, and results in contracts with long-lasting assurances and investments in the assets of suppliers. It also makes it easier for suppliers to participate in the initial phases of designing new product and to share risks and profits.

The study also recommends that the Humanitarian Organization should adopt Customer integration as it has been determined to positively influence Sustainable Competitive Advantage. Customer integration is important as it assists in integrating problem-solving, direct customer connection, efficient complaint management, nurturing and formation of long-lasting collaborations with clients, and implementation of client-focused activities to increase their satisfaction. Lastly, the study recommends full adoption of Internal Integration as it has also been affirmed to impact Sustainable Competitive Advantage of Humanitarian Organizations in Kenya. Customer integration is crucial because it facilitates integrated problem solving, direct customer interaction, efficient complaint management, cultivating and establishing long-term customer relationships, and implementation of client-focused inputs to increase their satisfaction. A company that actively communicates with its clients is better positioned to promptly and efficiently address their demands, improving order fulfilment and visibility and thus the need for adoption of Internal Integration by the Humanitarian Organizations in Kenya.

Finally, the study urges complete adoption of internal integration because it has been demonstrated to affect Kenyan humanitarian organizations' sustainable competitive advantage. The firms should implement internal integration because it is crucial to the entity and guarantees that parties involved in supply chains obtain info in a timely way by working together to comprehend the real needs of the customers. Internal integration helps organizations work together to accomplish tasks efficiently and more effectively. The Humanitarian Organizations in Kenya ought to implement internal integration since a company that passively works with its clients is well equipped to successfully and promptly attend to their demands in a quick and efficient manner. The organizations should adopt Internal Integration since it's important to the entity as it guarantees that parties involved in with the entity obtains information in a timely routine and are able to work

together in a way that allows them to comprehend the true clients' requests. Internal Integration also aids entities to perform functions as a unit to drive efficiency and improve the overall performance.

5.5 Suggestions for future research

The study suggests that future research may examine why there are differences in the rates of adoption of Supplier, Clients, and Internal Integration practices, and why not all of them have done so equally. If there are any further supply chain integration techniques not covered by this study, they should be investigated and their effects on sustainable competitive advantage determined.

Other research could concentrate on SCI strategies affect operational, supply chain, logistical performance, responsiveness, or even client satisfaction performance measures.

In addition to humanitarian organizations in Kenya, further research may concentrate on supply chain integration strategies in other industries (retail, franchises, medicines, or county governments). The setting can alternatively be limited to a specific city, such as Mombasa, Kisumu, Nakuru or Eldoret.

REFERENCES

- Abdi O. Shuriye, M. T. (2016). The Future of Statehood in East Africa. *Journal of Sustainable Development*; 9(2).
- Abdifatah, H. M. (2017) Supply chain management practices and their impact on performance among humanitarian organizations in Kenya. University of Nairobi
- Adam R. (2019). The Evolution and History of Supply Chain Management. <https://cerasis.com/history-of-supply-chain-management/>
- Alie W & Frank E. (2019). Supply chain Integration for Regional Firm Performance Improvement. *Int. J. Global Business and Economics Review*, Vol. X, No. Y, xxxx
- Amin M, Noorliza K and Wilawan J. (2018). Integrating Supply Chain and Network in a Humanitarian Context. Universiti Sains Malaysia, Pulau Pinang, Malaysia
- Bayraktar, E., Demirbag, M., Koh, S.C.L., Tatoglu, E., Zaim, H. (2019). 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*.
- Barratt, M. (2017), "Understanding the meaning of collaboration in the supply chain", Supply Chain Management, Vol. 9 No. 1, pp. 30-42. <https://doi.org/10.1108/13598540410517566>
- Beven, K. (2016). A manifesto for the equifinality thesis. *Journal of hydrology*, 320(1), 18-36. Contingency theory
- Chan, Felix T. S.; Prakash, Anuj (2019). "Inventory management in a lateral collaborative manufacturing supply chain: a simulation study". *International Journal of Production Research*. 50 (16): 4670–4685. doi:10.1080/00207543.2011.628709. hdl:10397/25934. ISSN 0020-7543.
- Cao, Mei; Zhang, Qingyu (2018). "Supply chain collaboration: Impact on collaborative advantage and firm performance". *Journal of Operations Management*. 29 (3): 163–180. doi:10.1016/j.jom.2010.12.008.
- Cigolini R, Cozzi M, Perona M., (2018). A new framework for supply chain management: conceptual model and empirical test. *International journal of operations and production management*
- Cooper, C., Lambert, M. and Pagh, D. (2017), "Supply chain management: more than just a new name for logistics", *International Journal of Logistics Management*,
- Deloitte, (2017). Kenya Economic Outlook 2017 , s.l.: s.n.

- Drechsel J. (2018) Cooperation in Supply Chains. In: Cooperative Lot Sizing Games in Supply Chains. Lecture Notes in Economics and Mathematical Systems, vol 644. Springer, Berlin, Heidelberg
- Eikenberry, Angela; Klover, Jodie (2014). "The Marketization of the Nonprofit Sector: Civil Society at Risk?". *Public Administration Review*. 64 (2): 132–40. doi:10.1111/j.1540-6210.2004.00355.x.
- Fawcett, S & Magnan (2018). 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. (2018), The impact of supply chain integration on performance, *Journal of Operations Management*, pp. 58–71.
- Goffin, Keith; Lemke, Fred; Szwejczewski, Marek (2016). "An exploratory study of 'close' supplier–manufacturer relationships". *Journal of Operations Management*. 24 (2): 189–209. doi:10.1016/j.jom.2005.05.003. hdl:1826/2117.
- Li S. et al (2019). The impact of supply chain management practices on competitive advantage and organizational performance. College of Business Administration, The University of Toledo, Toledo, OH 43606, USA
- Jeong, Chun Hai, Ibrahim, & Nor Fadzlina, Nawi (2012) Principles of Public Administration: Malaysian Perspectives, Kuala Lumpur: Pearson Publishers.
- Kanjejo A. Joan (2018) Lean Supply Chain Management Practices in the Public Universities, MBA
- Kaluki B. (2018). Supply Chain Management Practices and Service Delivery In Humanitarian Organisations In Kenya. <http://erepository.uonbi.ac.ke>
- Kiplagat .H. (2017) Supply chain management practices and organizational performance of public universities in Kenya, Unpublished MBA project, University of Nairobi, 2017
- Lavassani K., Movahedi B., Kumar V., (2016) Developments in Theories of Supply Chain Management: The Case of B2B Electronic Marketplace Adoption, *The International Journal of Knowledge, Culture and Change Management*, Volume 9, Issue 6, pp. 85-98.
- Lindsay A., Downs D., and Lunn K. (2013). Business processes—attempts to find a definition, *Information and Software Technology*, 45(15), pp. 1015-1019.
- Lee, C and Severance, D. (2017). 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. (2016), *Purchasing and Supply Chain Management*, 7th ed. Financial Times/Prentice-Hall, London
- Luthans, F., (2011) *Twelfth Edition, Organisational Behavior*, Tata McGraw Hill
- Mellat-Parast, M. and E. Spillan, J. (2019), "Logistics and supply chain process integration as a source of competitive advantage: An empirical analysis", *International Journal of Logistics Management*, The, Vol. 25 No. 2, pp. 289-314. <https://doi.org/10.1108/IJLM-07-2012-0066>
- Min, S. and Mentzer, J.T. (2017), Developing and measuring supply chain concepts, *Journal of Business Logistics*, 63-99
- Milkrun S. (2019). The Benefits of Integrated Supply Chain Management. <https://carter-logistics.com/benefits-integrated-supply-chain-management/>
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Qualitative and Quantitative Approaches*. Nairobi: Acts Press. Mugenda, O. M., & Mugenda, A. G. (1999). *Research methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Müller, Daniel; Schmitz, Patrick W. (2016). "Transaction costs and the property rights approach to the theory of the firm". *European Economic Review*. 87: 92–107. doi:10.1016/j.eurocorev.2016.04.013.
- Mungatia, K. L . (2016). Effectiveness of supply chain management strategy in disaster management in world vision Kenya. A research project submitted to the University of Nairobi.
- Ndambuki , D. (2017). Supply chain integration and supply chain performance of international humanitarian organization in Kenya. A research project submitted to the University of Nairobi.
- Niklas Luhmann (2013). *Introduction to Systems Theory, Polity*.
- Odira E. (2018). *Supply Chain Management Practices and Performance of Relief Humanitarian Organizations in Kenya*. School Of Business, University Of Nairobi
- Omondi, G. (2018). The Role of Supply Chain Leadership in Retail Institutions' Performance: The Case of Nakumatt Holdings Limited, Kenya. *International Journal of Humanities and Social Science*, 5(2).
- Okongwu, C., Burkhart, F. Moncef, B. (2018) Causal linkages between supply chain management practices and performance: A balanced scorecard strategy map perspective; *Journal of manufacturing technology*,

- Pessali, F. (2016). "The rhetoric of Oliver Williamson's transaction cost economics". *Journal of Institutional Economics*. 2 (1): 45–65. doi:[10.1017/s1744137405000238](https://doi.org/10.1017/s1744137405000238). ISSN 1744-1382
- PLS Logistics, (2016), Supply Chain Management Best Practices: Reliability <http://info.plslogistics.com/blog/supply-chain-management-best-practices-reliability>
- Pratono, A.H. (2016) "Strategic orientation and information technological turbulence: Contingency perspective in SMEs", *Business Process Management Journal* 22: 368–382.
- Ruey, Bryan Jean, (2018) Information technology and organizational performance within international business to business relationships: A review and an integrated conceptual framework, *International Marketing Review*
- Sharif, S. P. and Yeoh, K. K. (2014). "Independent Directors' Resource Provision Capability in Publicly-listed Companies in Malaysia." *Corporate Ownership and Control* 11(3): 113-121.
- Scott, W. R. (2013). *Organizations: Rational, Natural and Open Systems* (5th edition), Prentice Hall.
- Schmitz, Patrick W. (2016). "The negotiators who knew too much: Transaction costs and incomplete information". *Economics Letters*. 145: 33–37. doi:[10.1016/j.econlet.2016.05.009](https://doi.org/10.1016/j.econlet.2016.05.009).
- SooWook Kim (2016) Effect of supply chain management practices integration and competition capability on performance. *International Journal*
- Solakivi, T., Töyli, J., Ojala, L. (2018). Logistics outsourcing, its motives and the level of logistics costs in manufacturing companies operating in Finland, *Production Planning & Control: The Management of Operations*.
- Sukati I. et al (2018). Competitive Advantage through Supply Chain Responsiveness and Supply Chain Integration. www.ijbcnet.com International Journal of Business and Commerce Vol. 6, No. 7: Mar 2012[01-11] (ISSN: 2225-2436)
- Togar M. Simatupang; Ramaswami Sridharan (2017). "Design for supply chain collaboration". *Business Process Management Journal*. 14 (3): 401–418. doi:[10.1108/14637150810876698](https://doi.org/10.1108/14637150810876698).
- Twin A. (2019). Competitive advantage. <https://www.investopedia.com>
- UNOCHA. (2019). Logistics support United Nations Retrieved from <http://www.unocha.org/what-wedo/coordination-tools/logistics-support/overview>
- Woods C. (2019), What Is Supply Chain Integration? - Definition & Overview. <https://study.com/academy/lesson/what-is-supply-chain-integration-definition-lesson-quiz.html>

Zhou, H. and Benton, W.C. Jr (2017), Supply chain practice and information sharing, *Journal of Operations Management*.

Mugenda, O. M., & Mugenda, A. G. (2012). Research methods dictionary. International Publishers

Nkirete, M. (2017). Supply chain integration and organizational performance of kenya medical supplies authority. Retrieved from

<http://repository.dkut.ac.ke:8080/xmlui/bitstream/handle/123456789/4641/Ireen%20Mutwiri.pdf?sequence=1&isAllowed=y>

Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International journal of nursing studies*, 47(11), 1451-1458.

APPENDICES

Appendix 1: Collection Letter



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Our Ref: D67/21508/2019

January 20, 2023

TO WHOM IT MAY CONCERN

INTRODUCTION LETTER- IRENE AKOTH ODUDO

The above named is a registered Master of Science (MSC) candidate at the University of Nairobi, Faculty of Business and Management Sciences. He is conducting research on "Supply Chain Integration and Sustainable Competitive Advantage of Humanitarian Organizations in Kenya."

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the thesis.

The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

A handwritten signature in black ink, appearing to read 'Philip Mukola'.

Philip Mukola (Mr.)
For: Associate Dean,
Faculty of Business and Management Sciences

PM/pgf

Appendix 2: Research Questionnaire

Kindly go through the questions and provide your appropriate responses. The reason for conducting this study is purely academic and no responses provided by the respondents will be shared with a third party.

Guidelines

1. Select the appropriate response by placing a tick.
2. Any additional information is highly appreciated.

SECTION I: RESPONDENT’S DEMOGRAPHIC DATA

1. Respondent’s Gender:

Female Male

2. Age of Respondent

Twenty –Twenty five years twenty six-Th years
 Thirty one-3Thirty five years Over Fourty years

3. Academic Qualifications

Diploma Graduate Post Graduate

4. Duration worked in this entity in years

1-5 6-10 11-15 16-20 above 20

SECTION II: SUPPLY CHAIN INTEGRATION PRACTICES

5 Select the option that best describes the extent of adoption of Supply Chain Integration by the Humanitarian Organization?

Apply a scale of 1-5 where 1=Very low extent, 2=Low extent, 3=Moderate extent, 4= Great extent and 5=Very great extent

	Supply Chain Integration	1	2	3	4	5
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Supplier Integration					
1	The organisation focuses on long term collaboration with suppliers				
2	Vendors are actively engaged in critical processes of making decision making in the Organization				
3	Creating advance awareness with the suppliers about changing needs				
4	The organization focuses on quality assurance from suppliers				
5	Creation and maintenance of supplier connections				
6	Suppliers are involved when developing specifications or a product				
7	There is adequate knowledge and information sharing between the organisation and suppliers				
8	Timely delivery of orders using efficient ordering systems				
9	Organisational packaging and branding customisation with suppliers have been achieved				
10	The gains as a consequence of collaboration with suppliers are equally shared				
11	The Organization occasionally carries out trainings to educate suppliers				
12	Continuous information programs have been achieved				
Customer Integration					
1	The Organization retains one-on-one contact with its beneficiaries				
2	The Organization has in place a database of potential beneficiaries and potential disaster areas				
3	The Organization engages beneficiaries and works hand in hand with them for better delivery of service during the disaster				
4	Beneficiaries engagement through regular meetings				
5	Expansive distribution network for humanitarian supplies				
6	The organisation is conscious of its customer requirement				
7	Organisational activities and processes are aligned with recipient needs				

8	Beneficiaries are encouraged to provide feedbacks					
9	The organization uses the feedbacks from its recipients					
10	The organisation has systematic processes for handling recipients complaints					
11	The entity ensures an effective flow of supplies from to its beneficiaries					
Internal Integration						
1	Ease of information movement within diverse sections in the Organization					
2	Stakeholder engagement through periodic interdepartmental meetings are commonly utilized					
3	Sharing of information inside the organisation is extensive					
4	Integration of data among internal functions is attained via ERP systems					
5	There is a high degree of data integration information process					
6	There is a visibility of processes within the organization					
7	The entity embraces Teamwork management					
8	Periodic interdepartmental meetings are always conducted internally					
9	Equal sharing of pertinent information in all functional areas					
10	Internal data integration via IT systems					

SECTION III: SUPPLY CHAIN INTEGRATION AND SUSTAINABLE COMPETITIVE ADVANTAGE

6. In this question you are requested to rate the degree of your concurrence with provided measures concerning the impact of SCI practices on the Sustainable competitive advantage of Humanitarian Organizations in Kenya. Apply the scale of **1-5**

Cost Metrics	1	2	3	4	5
Reduced transportation/logistics cost					
Improved capacity utilization					
Aggregate purchasing					
Long agreements with suppliers					

Timeliness Metrics					
Timely delivery of emergence supplies					
Order lead time reduction					
Timely inventory replenishment					
Timely arrival at disaster scene					
Decrease in time to solve beneficiaries' complaints					
Quality Metric					
The organization meets conformance to specification					
Effective Quality control Process					
Reduction in the number of beneficiary complaints during supply of consumables					
Reduction in number of defective or stale supplies					
Enhanced Service Delivery					
Flexibility Metrics					
Organization's capacity to react to crises of various sizes and in varied amounts of time					
Improved the capacity to react to quick changes to the beneficiary requests					
Service Delivery Metrics					
Reliable deliveries to beneficiaries					
Reduced number of complaints from beneficiaries					

Appendix 3: Humanitarian Organizations Kenya (2022)

1	Action Africa Help International
2	Action Against Hunger
3	Adam Smith International
5	Amref Health Africa
6	CARE International
7	Catholic Relief Services
8	Center for International Health Education & Biosecurity (CIHEB)
9	Christian Aid
10	Church World Services
11	Danish Refugee Council
12	European Commission Humanitarian Aid & Civil Protection (ECHO)
13	European Union (EU)
14	Evidence Action
15	Family Health International (FHI 360)
16	Feed The Children
17	Foundation Terre Des Hommes
18	Habitat for Humanity
19	Hebrew Immigrant Aid Society (HIAS)
20	HJF Medica Research International
21	International Committee Of Red Cross (ICRC)
22	International Organisation for Migration
23	International Red Cross Federation of Red Cross
24	International Rescue Committee (IRC)
25	Islamic Relief
26	Kenya Red Cross
27	Lutheran World Relief
28	Master Card Foundation
29	Médecins Sans Frontiers (MSF) Kenya
30	Mercy Corps
31	Norwegian Refugee Council (NRC)
32	Palladium Development and Consultancy Kenya
33	Plan International
34	Save the Children International
35	Tetra Tech
36	The Fred Hollows Foundation
37	Trocaire
39	United Nation Development Programme (UNDP)
40	United Nation High Commission for Refugees (UNHCR)
41	World Food Programme (WFP)