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ROLE OF HUMANITARIAN SUPPLY CHAIN MANAGEMENT PRACTICES ON PERFORMANCE OF INTERNATIONAL NONGOVERNMENTAL ORGANIZATIONS IN KENYA

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ABSTRACT

This research tried to evaluate the role of humanitarian supply chain management practices on performance of international nongovernmental organizations in Kenya. Specifically, this study dealt with the effect of organization supply chain planning and strategic sourcing on performance of International Non-Governmental Organizations in Kenya. The research used system theory, the theory of resource-based perceptions, resource-dependence theory, and the theory of principal agents. This analysis used a descriptive research design. The target population was 307 workers including all procurement officers, management and different department heads from all 27 INGOs. This research study used a stratified random sampling method to select 171 respondents. The study would obtain primary data from the respondents using questionnaires. The data was analyzed using inferential and descriptive statistics. Concise analyzes are measured for all quantitative variables, such as frequencies, percentages, mean score and standard deviation. Regression analysis using Multiple Linear Regression model was employed to establish the sense of the independent variables on the dependent variable. Data representation was done through tables and graphs. The study concludes that supply chain planning has a positive and significant effect on the performance of INGOs in Kenya. In addition, the study concludes that strategic sourcing has a positive and significant effect on the performance of INGOs in Kenya. This study recommends that the management of the INGOs should ensure demand management and capacity management so as to improve performance of the INGOs. In addition, the management of the INGOs should ensure effectiveness in supplier selection, supplier negotiation and supplier commitment.

Key Words: *Supply Chain Management, Supply Chain Planning, Strategic Sourcing, Performance*

Background of the Study

In the 21st century, the world has experienced many major humanitarian crises, resulting in a great need for humanitarian intervention and collaboration between relief organizations to help the affected. Kunz and Reiner (2012) also endorse this in their finding that more and more natural and man-made disasters have impacted various regions of the world in recent years, killing thousands of people and causing millions of indirect deaths. This calls for large

humanitarian missions with a focus on providing rapid relief to the affected areas, including host governments, regional and military organizations, foreign aid agencies and private companies, all with their tasks, competences and objectives.

With the rising need for humanitarian aid, the organizations themselves are rapidly growing and developing, and their supply chains are the subject of growing interest from practitioners and researchers. According to Torre et al. (2011), the Humanitarian Supply Chain Management (HSCM) involves managing the various interrelated factors that are central to the effectiveness of the humanitarian operating system, such as goods and services, information, finances, political authorities, the available infrastructure, etc. reducing the effect of a catastrophe on affected people. Relief operations include the activities in many dimensions, such as organized and efficient rescue efforts, health and medical assistance, food, shelter, and long-term recovery activities. The effectiveness of any relief project depends heavily on the efficiency of the logistics distribution operations. However, despite the fact that the logistics task is the core of all relief operations, the importance of logistics was only recently recognized (Torre et al., 2011).

In industry, manufacturers are required to produce products of acceptable quality for consumers and deliver those goods with highly reliable delivery times at a competitive cost. Although achieving high quality standards, timeliness of shipments and efficient supply chain processes cannot rely on a single entity, cooperation and collaboration with trading partners should be ensured (Angkiriwang, Pujawan & Santosa, 2014). INGOs will track their impact on the beneficiaries, concentrate on quick results and transparency, as they rely heavily on donations. They are held to the highest moral standards and required to be successful (Van Wassenhove, 2017).

Humanitarian organizations, according to Byman et al. (2015), must deal with many stakeholders, including distressed donors, the government, the military and the beneficiaries. The end user does not enter into a commercial transaction and has little influence over the supply; customer service will need to approach the donor who wants to be told how the humanitarian action is taking place (Munslow & Brown, 2009). Through the years, the severity of natural and man-made disasters has increased, for example terrorist attacks in Kenya have become a major concern, service delivery in humanitarian organizations needs to be improved so that survivors can be assisted in the affected areas quickly and effectively.

The supply chain is essential to the disaster relief, for several reasons, according to Thomas (2016). Firstly, the supply chain acts as a bridge connecting three stages of the disaster (i.e. preparedness, response and recovery) as well as the network-wide procurement and distribution. Secondly, the efficacy and resilience of the response is very important for the humanitarian clusters (e.g. food, shelter, health). Essentially, the supply chain controls the management of aid supplies via the supply chain (Thomas, 2016).

Supply chain operations are the costliest component of humanitarian efforts (i.e. about 80 percent of total expenditure), which can be the difference between a failed or successful

operation (Van Wassenhove, 2017). As a result, considering the importance of the supply chain in a crisis and the large increase in the size of the relief sector, humanitarian assistance should be approached from the SCM perspective. It has also been estimated that some 60-80% of NGOs' spending is spent on humanitarian relief supply chain operations with an annual budget of over $25 billion, indicating NGOs' substantial contributions to the supply chain effort in this sector (Tatham & Pettit, 2010). The sector of HSCM has become important to both academics and practitioners, particularly since the poor SCM performance outcry of the 2004 Indian Ocean tsunami (Kovács & Spens, 2011). The disaster mentioned and other related criticism of managing the supply chain for humanitarian aid is often marked as the turning point of the supply chain for humanitarian relief.

Active SCM is a tactical and cost-effective tool for providing relief by increasing operational efficiency, planning, procuring and distributing relief items (Wassenhove, 2017). Consequently, only those International Non-governmental Organizations (INGOs) which can leverage emergency chain management as a differentiator and strategic tool are likely to have a sustainable competitive advantage in donor fund competition, thus ensuring the viability and survival of their sector. Humanitarian supply chains need to be able to respond to various initiatives as easily as possible and within a limited time frame. Nevertheless, quality assurance in the humanitarian supply chains requires the intangibility of the services offered the immeasurability of the project, unpredictable outcomes and the variety of expectations and standards of stakeholders (Balcik & Beamon, 2018).

SCM practices will vary between business-oriented enterprises and NGOs because of changing levels of physical and human resources. Because of its relatively large asset bases, large companies are more likely to adopt world-class best practices such as benchmarking, sourcing, supply chain growth, strategic alliances and partnerships. Large enterprises have well recognized the benefits of SCM, but small and medium-sized enterprises (SMEs) lag behind in their perception of how the integrated supply chain promotes dramatic improvements in business activities and has positive effects on better quality products, cost savings and productivity. Past studies have shown that a large proportion of small and medium-sized companies still rely on manual processes to manage their global trade operations, especially their exports. In that way, SMEs are likely to adopt SCM practices such as customer-supplier relationships, training, IT, internal systems and processes (Barua, 2013).

INGOs have deep roots and traditions in their organizations and are deeply committed to their various, often special missions. For this reason, the preservation of organizational autonomy is often cited in their supply chains as an obstacle to improved collaboration and interoperability. Given the strong desire of INGOs for autonomy, interoperability is best seen not as sharing common systems but as innovation (Solomon & Brown, 2014).

In Kenya the NGO Managing Board licenses and controls INGOs. These organizations support government initiatives to enhance living conditions by implementing various donor-funded projects. Most of these challenges are related to SCM policies and the need to obey

donor guidelines that do not necessarily lead to the efficient use of funds and the quality of service delivery (Kirungu, 2011). Information exchange between organizations is rigid due to bureaucratic processes and excessive dependency on manual communication methods which have compromised the efficiency of SCM due to delays in information between agencies (Omondi, Ombui & Mungatu, 2013). In Kenya, long-term rather than short-term SCM problems among INGOs are complicated by the sometimes-transient existence of NGO workers. NGO staff also face up to 80 per cent of annual turnover. It makes it difficult for these employees to spend time and money in SCM systems in the longer term (Kimani, 2013). The study will therefore focus on the effect of HSCM on performance of INGOs in Kenya.

Statement of the Problem

The difficulty of supply chain success in humanitarian operations is compounded by several factors. Delays in service delivery and increased operating costs have adversely affected the humanitarian supply chain (Nduati & Ogollah, 2016). Fritz Institute, (2017) reports that 70% of the NGOs experience high cost of transportation and delays in delivery of services, which in turn lead to low beneficiaries satisfaction. In addition, only 58% of the NGOs have adopted technology. Lack of adoption is attributed to lack of necessary infrastructure, which in turn negatively affects collection, storage and distribution of information. In addition, due to poor infrastructure, nongovernmental organizations often experience stock out of food and other supplies including medical supplies (Nduati & Ogollah, 2016).

Not only do humanitarian organizations need to ensure adequate and appropriate communication their activities also need to be well organized to ensure they respond to the emergency in a timely manner and with sufficient supplies and resources to remedy the situation and ensure maximum impact of their activities hence increase customer satisfaction (World Bank, 2013). Information sharing among institutions is minimal due to bureaucratic frameworks and over-reliance on manual communication methods that have impacted supply chain management performance due to information delays from one organization to another (KNBS, 2014). In most INGOs, the beneficiary's needs are the basis for supply chain planning. These plans, however, are often complex given that INGOs are involved in global supply chains. Sourcing supply information for INGOs has strengthened their purchasing power, but they have struggled to find the best possible market values to comply with their purchasing strategy (Omondi, Ombui & Mungatu, 2013).

Information sharing and technology is one of the main co-ordination elements of a supply chain between parties. It establishes strong ties of suppliers among organizations. However, because of the global supply chain, however INGOs find it difficult to create such relationships (Lisanza, 2014). Most vendors are shying away from the INGOs because of their global standards. It is the duty of INGOs to be transparent, accountable and ethical in providing accurate information and in not exploiting circumstances for the personal benefit of their boards and staff. But when it comes to inventory management, most INGOs have failed in these virtues (Omondi, Ombui & Mungatu, 2013). This has resulted in poor performance

of INGOs in Kenya where consumers have not been fully satisfied with their services (Marwa, 2016).

Reviewed local studies (Pettit & Beresford, 2009; Lisanza, 2014, Odira, 2018; Marwa, 2016 and Kamau, 2013) did not critically address the various humanitarian supply management aspects such as supply chain planning, strategic sourcing, supplier relationship management and inventory management practices that affect performance of INGOs. Studies by Pettit and Beresford (2009) and Lisanza (2014) were narrow and suffered from conceptual gaps since they only addressed cooperation as a key differentiator in the supply chain. The study by Odira (2018) suffered from a contextual gap since it concentrated on the supply chain management practices while the focus of the current study is on humanitarian supply chain management practices. The study by Marwa (2016) did not also try to explore the effect of humanitarian supply management practices but instead it focused on determinants of effective implementation of supply chain management practices. Because of these conceptual and contextual differences, the current study seeks to establish how the performance of INGOs in Kenya is influenced by various humanitarian supply management activities such as supply chain planning, strategic procurement, supplier relationship management and inventories management.

Research Specific Objectives

The study specifically sought to;

i. To assess the effect of supply chain planning on the performance of INGOs in Kenya.
ii. To examine the effect of strategic sourcing on the performance of INGOs in Kenya.

LITERATURE REVIEW

Theoretical Review

Systems Theory

System theory was founded by the biophysicist Ludwig von Bertalanffy in the 1940's. Systems theory argues that a supply chain planning is seen as a whole and not simply the sum of its elementary parts. Supply chain planning involves demand management, capacity management and needs assessment, the interrelationship and interdependence of which moves towards greater network balance (Åström & Wittenmark, 2013), concentrating on the interaction between parts to understand the structure, operation and effects of supply chain plans. It also assumes that the organization communicates continuously with its environment, which consists of a collection of relationships between members, shareholders and other factors beyond the control of the organizations (Curtain & Zwart, 2012).

Throughout the context of supply chain planning, systems theory puts together different components of the dynamic supply chain planning (demand management, capacity control and needs assessment activities) to form a subsystem that is then a broader supply chain network structure (Liu & Forrest, 2010). It can also help to identify interdependencies between network constituents and a better understanding of supply chain dynamics, thereby enhancing the planning implementation and coordination of the humanitarian supply chain.

The hypothesis would thus form a foundation on the study's goal of coordinating the supply chain planning, as companies need to establish a deeper understanding of the supply chain strategy processes that will evolve over time, as the requires a constant development of management practices to maintain supply chain productivity. This study was therefore used in this research to assess the effect of supply chain planning on the performance of INGOs in Kenya.

Resource Based View Theory

The theory was developed by Birger Wernerfelt in 1984. RBV believes that understanding and providing internal strategic resources contributes to the ability of a company to create and maintain a competitive advantage and enhance the quality. A resource is considered strategic if it meets certain criteria that are important, non-replaceable, unique or essential and imitable to contribute to the enhancement of the company's performance (Barney, 1991). In strategic sourcing, Resources must be handled and used efficiently in light of the changing external circumstances faced by a company in a competitive business setting.

Resources such as funds are required to be sufficient for efficient strategic sourcing. A well-managed supply chain is important in today's ultra-competitive global economy to build competitive advantage and value for the company (Lambert & Cooper, 2015). When a company develops strategic sourcing ties with suppliers and consumers, it promotes the management of the flow and quality of materials into and out of the business, so the benefits should be directly attributable to operational success (Galbreath, 2017). The resource-based view of the purchasing year cycle can contribute to and assist every decision-making point on how to source strategically. This research is important to the study as it aims to highlight the importance of adequate resources in international non-governmental organizations for successful strategic sourcing. Resource based view theory was used to assess the effect of strategic sourcing on the performance of INGOs in Kenya.

Conceptual Framework

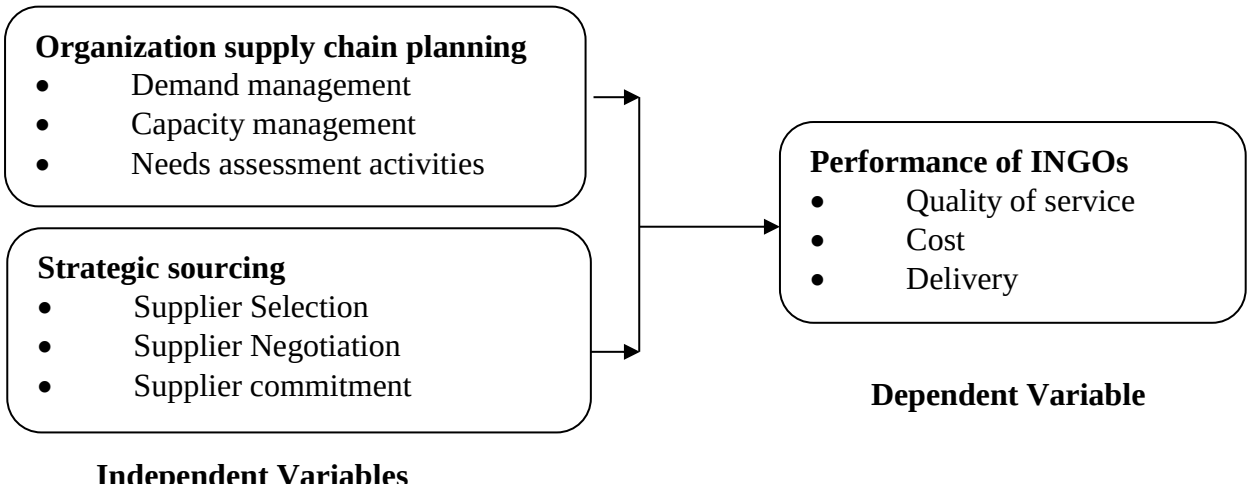

Figure 1: Conceptual Framework

Organization Supply Chain Planning

There exist various logistic and supply chain problems, which affect the process of providing humanitarian support to the communities. A smooth flow of activities between all the parties is required if things have to go on smoothly. Humanitarian logistics involves many players that differ in terms of their interests, logistic expertise, purpose, capacity and culture. They include aid agencies, governments, companies from the private sector, donors, non-governmental organizations, military and other social institutions such as schools, churches and hospitals (Howden, 2009).

Demand management is concerned with adapting supply chain capabilities to customer needs. A catastrophe puts huge demands on the supply chain, technical and organizational resources of the country concerned (WHO, 2017). Instantly after a disaster occurs, relief organizations perform an initial assessment, determine the estimated amount of supply needed to meet the population's relief needs, classify relief products to be procured, this assessment is converted into supply requirements. This enables the organization to know the goods and services required by the affected victims and deliver them.

Capacity management helps to evaluate the resource available for each time. The primary aim is to ensure that its capability meets current and future business requirements cost-effectively. The complicated and interconnected nature of modern supply chain means that failure at any point on the chain can have ripple effects. Through ensuring that suppliers are able to accommodate both unforeseen and anticipated upswings in demand, businesses can minimize the risk of their supply chain and avoid costly and long-lasting disruptions (Gunasekaran & Ngai, 2016). Four key areas impacting efficiency are warehousing, storage, human resources and materials handling equipment. Efficiency-enhancing networks can be accomplished by cooperation with commercial organizations, such as World Food Programme in association with TNT. Additionally, it may extend to include the ability of ports and airports to handle relief commodities under different scenarios.

Needs assessment is a 'time-bound, multi-sectoral, multi-stakeholder method of collecting, evaluating and interpreting data to determine needs and inform decisions on humanitarian responses and early recovery (Gartfield, 2011). Initially, international humanitarian organizations carry out a humanitarian needs assessment to bridge the gap between the supply and demand sides of the situations (Selda & Emmett, 2010). The importance of assessing the need is to determine the possible balance between the supply of goods and services from the market and what the victims of the disaster need.

The success of any humanitarian assistance is based on the assessment of the needs that the vulnerable population requires before the provision of the aid. Humanitarian logistics should thus put more effort into setting those requirements in order to provide what is best needed. Scholars suggest that the best way to do need assessment is by focusing closely on the programme lens. It has also been noted that quickly performed multi-sectoral assessments of needs are not so successful at making informed decisions (Pan Africa Health Organization,

2013). That means that each disaster should have its own assessment of needs and not a universal perception.

Strategic Sourcing

Strategic sourcing is a cornerstone of active procurement management. CIPS (2012) defines strategic sourcing as meeting the needs of customers through proactive and scheduled market analysis of supply with the goal of providing solutions to predetermined and agreed business needs. In the decision-making process, large industries deliberately include internal consumers (De & Bouchikhi, 2014). We ask these customers for feedback and information about their goals and plans, which may include operational areas such as finance and accounting, infrastructure, logistics, maintenance, safety / health / environment, and quality assurance — any internal business unit or role that contributes to the success of the initiative. This ensures versatility of the product, resulting in lower production costs, simplified processes and greater responsiveness to changing consumer needs.

Sourcing means the identification selection and development of suppliers. Strategic sourcing is about formulating long-term procurement strategies and supplier base (Kenneth & Brian, 2012). One important consideration in designing a supply chain is the sourcing decision, that is, where to obtain your materials, in what quantities and at what time. Jan and Per (2012) clarify that the procurement strategy includes a variety of factors, including the number of suppliers to be contracted, the type of relationship to be sought with the suppliers and the form and terms of contracts to be negotiated.

According to Boateng (2016), SCM involves strategic management of the companies in the chain; whereas procurement is largely part of the SCM system which manages the purchase of goods or services by the end user. On the other hand, strategic procurement is a sub-set procurement activity which maximizes the use of every cent used to buy materials and resources. The relationship between the firm and its suppliers was designed to exploit the strategic and operational expertise of individual participating organizations to help them achieve significant ongoing benefits. Supply relationship emphasizes solid, long-term partnership, and encourages constructive communication and problem-solving activities (Ku, Wu & Chen, 2016). These supply partnerships are formed to promote mutual benefits and ongoing participation in one or more key strategic areas such as software, services and markets. Strategic partnerships with suppliers enable companies to work more closely with a few major suppliers who are willing to share responsibility for the quality of their customers.

Selection of suppliers is the process of choosing a supplier to procure the required materials to help organizations outputs. Selection of the best and/or most suitable suppliers is focused on assessing supplier capabilities. Organizations work in a world marked by regular economic and political disruptions to their sources of supply and service. To survive in this turbulent marketplace, these organizations need to constantly track their competitive position and their processes that can be managed internally, particularly the procurement process (Burt, Dobler & Starling 2016). Strategic sourcing involves taking a strategic approach to supplier selection which is more consistent with the competitive strategy of the company.

Supplier selection represents conformity with the company's procurement and sourcing strategy.

The transition from procurement to supply management reflects the convergence of procurement and business strategy. Strategic procurement is a well-established and validated strategy for large, medium to long-term acquisitions. It has been embraced as a common practice by various public and private organizations in developing countries. This consists of two main capacities-strategic procurement and category management (Badcoe, Arrowsmith & Trybus, 2016). In strategic contracting, the emphasis is on building a comprehensive knowledge base for the business and the category and using this information to establish optimal sourcing solutions.

Supplier Negotiation is the mechanism through which procurement practitioners establish favorable terms as part of a new contract with a new supplier. This may include negotiating with an established supplier on different terms when a contract is extended, or proposing terms from scratch with a brand new supplier (Burt, Dobler & Starling, 2016). Organizations can strengthen suppliers' capacity for transparency and risk management, and promote knowledge sharing and verification through sustainable procurement processes. Measuring supplier quality by evaluating suppliers ' sustainability practices leads to increased internal and external productivity and promotes accountability and transparency (De & Bouchikhi, 2014). This in effect encourages compliance with any environmental legislation and makes it possible to better identify and mitigate the risks associated with goods or suppliers. Reliability in procurement processes and cooperative supplier dialog often encourage the development of a reliable supply chain that eventually improves brand reputation and value for business.

Supplier commitment implies the supplier's dedication to preserving and fulfilling their role in strategic sourcing. Commitment plays an increasingly important role in helping big business to achieve cost savings by strategic material procurement. The ability of strategic procurement feature to improve organizational efficiency and shareholder value in Ghana was not well known and thus not widely acknowledged. Global competition has driven companies to formulate and adopt global procurement approaches that aim to reduce costs and improve efficiency (Masiko, 2013). It has helped Overseas sourcing methods to be a key strategic driver of organizational success. Strategic procurement is a corporate strategy or game plan for promoting the worldwide use of products and resources. Improvement in the value chain and cost savings can be accomplished by regulating efficiently the root of companies and their intangible and tangible products.

Lysons and Gillingham (2016) define collaboration as a commitment of customers and suppliers to a long-term relationship, regardless of size, based on clear, mutually agreed objectives to achieve world-class efficiency. The focus is on good working relationships between consumers and suppliers. The idea of supplier partners emerged strongly in the 1980s as a result of the push toward just-in-time (JIT) fabrication. JIT emphasizes waste reduction, lead times elimination, enhancement and usability. These are also the goals

relating to distributors (Bicheno, 2013). The philosophy is that both parties benefit from collaboration, rather than conflict.

Performance of Humanitarian Organizations

Humanitarian organizations, once disasters occur, are at the forefront of any given response. When such organizations respond quickly enough, disaster management is seen as fast and reliable. As Davidson (2017) states, if such organizations, however, do not respond quickly enough in the eyes of the media and local government, then their names and prestige are tarnished by the blame placed upon such organizations. This also influences the foundation and supporters of the organisation. Without donor aid, the entire capacity of a humanitarian organization to continue its activities is in grave danger. The issue of how to assess the success of humanitarian organizations has recently become a hot topic, due mainly to the disasters that have occurred and the ever-evolving nature of humanitarian assistance. Davidson (2017) continues to argue that the lack of centrally collected data, limited information, organizational culture and lack of coordination are key factors in preventing such a question from being answered.

Service quality (SQ) in the SCM sense can be defined as the distinctive difference in the understanding of the individual elements involved in a supply chain about the whole supply chain's expectations and output as a whole. Only by putting aside the conventional arms-length relationship and establishing closer partnership-type relationships can the satisfaction of each supply chain member increase (Moeiny & Mokhlesi, 2011). Service quality is an important instrument in the production of such relationship style arrangements. There is no universal set of measurements and objects that define the service quality in different cultures across a segment of the service industries, so service quality measurement must be adapted to fit the context. Hence, context-specific quality of service measurement scales is required (Burns, 2012).

Supply chain costs also account for a large percentage of a product or service's selling price. Humanitarian organizations, when providing the necessary goods, works and services to the recipient, rely heavily on the sourcing, storage, distribution and warehousing functions of such SCM. These come with a cost. In 2017 Hurricane Katrina ravaged New Orleans, LA, leaving people with no access to food and clean water. The citizens had to do huge rescue as a result. Humanitarian aid organizations and NGOs supplied 1.9 million meals and 6.7 million liters of water during the rescue effort's first weekend (Gravois, 2012).

Service delivery makes sure the ordered items are delivered as agreed. Consequently, a humanitarian organization's ability to improve the lives of the world's most disadvantaged communities depends heavily on its ability to integrate and coordinate its SCM functions to provide the desperately needed products, works and services to the target communities. Rodman (2014) notes that without effective, secure, consistent and well-coordinated procurement and logistics processes, the humanitarian sector is at risk of unnecessary costs and delays that put their vision, efforts and commitment to improve the lives of the less fortunate, at risk and, ultimately, poor performers.

Empirical Review

The study by Mohamed (2012) was instrumental in expunging how SCM practices help humanitarian organizations provide service. However, his research was limited to the performance relationship between supply chains and the service provided to people by humanitarian organisations. Study by Moeiny and Mokhlesi (2011) found that the effectiveness of any contribution to humanitarian aid is only through a properly equipped supply chain. However, unlike in a developing nation like Kenya, the economic and political environment of their study was benchmarked on an developed nation.

A further significant study was performed by Nyamu (2012). He found that there is a positive correlation between the presence of the supply chain and the scope of service delivery to the people by the humanitarian organizations. However, his research dealt solely with the SCM issues affecting Kenya's humanitarian organizations. Nevertheless, his research was limited to the field of logistics and supply chain activities. Study by Mungatia (2010) found that World Vision Kenya was sensitive to disasters based on proof of the many cases the organization assisted in disasters. Nevertheless, the use of World Vision Kenya as the only case study of NGOs ' response to disasters limited the way other NGOs reacted.

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

Andebe (2013) conducted a survey of green SCM practices in the textile industry in Kenya, and found that green SCM practices have been adopted to a minimum by the textile industry. However, the study in question did not comment on these specific practices in the sector. Furthermore, Kenya's textile industry is shaken by intense competition from low-cost imports of new and second-hand clothing; thus, the practices may not extend to international organizations in Kenya.

Chong et.al (2011) empirically evaluated a framework that defined manufacturing and service companies in Malaysia's SCM activities, organizational efficiency, and innovation quality. For the evaluation of the experimental method the structural equation simulation was used. The results showed that SCM activities have a strong and substantial impact on the quality of Malaysian companies ' organizations in both the upstream and downstream supply chain. The findings also showed that there was no significant difference in their SCM practices between manufacturing and service firms in Malaysia.

Okwach (2014) conducted a study on SCM: theory, practice and future challenges in Europe, identifying SCM enablers and barriers such as information and knowledge transparency,

supply chain behavior and performance measurement and SCM drivers such as globalization, outsourcing and fragmentation and, to some extent, market polarization**.** This study although relevant was conducted in Europe and covered a broader scope than the focus of this study.

RESEARCH METHODOLOGY

This analysis employed a descriptive research. Descriptive analysis, a descriptive study, according to Creswell and Creswell (2017), deals with the what, how and who of a phenomenon that is the concern of this review. All 27 INGOs in Nairobi (NGO Board, 2019) were the target population for this analysis. The target population included all 27 NGO procurement officers, management staff and various department heads distributed among the NGOs. By calculating the target population of 307 with a confidence level of 95 percent and an error of 0.05 using the formula below taken from Kothari (2004), a sample population of 171 will be achieved. In this research study a stratified random sampling method was used to select the participants and sample them. The study would eventually pick 171 participants.

The questionnaire was conducted by drop-and-pick method so that the respondents have enough time to go through the questionnaire and fill in their answers. The study used questionnaires to collect' key information' from the respondents. The data was analysed using both descriptive statistics and inferential ones. Concise analyses such as frequencies, ratios, mean score and standard deviation shall be determined for all quantitative variables. The data was represented by tables and graphs.

Regression analysis using Multiple Linear Regression model was employed to establish the significance of the independent variables on the dependent variable. Data was compiled and analyzed by means of Software Program Assistance, Social Sciences Statistical Package (SPSS) version 25 to communicate research findings, on account of concurrence to objectives. Tables were used for data presentation. Regression analysis was run to examine the relationship among the independent and the dependent study variables which are set out in the objectives of the study.

FINDINGS

Out of the171 questionnaires distributed, 164 questionnaires were filled and returned which translated to 95.9% response rate.

Descriptive Statistics

Supply Chain Planning and the Performance of INGOs

The first objective of the study was to assess the effect of supply chain planning on the performance of INGOs in Kenya. The respondents agreed that suppliers have the capacity to accommodate upswings in demand (M= 3.978, SD=0.987). In addition, the respondents agreed that there are effective supply chain plans in the organization (M= 3.925, SD=0.733). Further, the respondents agreed that IT capacity meets current and future organization requirement in an effective manner (M= 3.889, SD=0.976). The respondents also agreed that the organization knows the goods and services required by the affected victims and deliver them (M= 3.878, SD=0.904).

As shown in the results, the respondents agreed that the organization has ways to reduce demand variability and improve operational visibility (M= 3.863, SD=0.790). Further, the respondents agreed that the organization carries out an assessment after a disaster strikes to bridge the gap between Supply and Demand (M= 3.790, SD=0.776). The respondents also agreed that the organization determines the available resource per period (M= 3.763, SD=1.006). In addition, the respondents agreed that the organization balances requirements with the capabilities of the supply chain. This is shown by a mean of 3.687 (std. dv = 0.923).

Table 1: Supply Chain Planning and the Performance of INGOs

	Mean	Std. Deviation
The organization balances requirements with the capabilities of the supply chain	3.687	0.923
The organization has ways to reduce demand variability and improve operational visibility	3.863	0.790
The organization carries out an assessment after a disaster strikes to bridge the gap between Supply and Demand	3.790	0.776
The organization knows the goods and services required by the affected victims and deliver them	3.878	0.904
Suppliers have the capacity to accommodate upswings in demand	3.978	0.987
IT capacity meets current and future organization requirement in an effective manner	3.889	0.976
There are effective supply chain plans in the organization	3.925	0.733
The organization determines the available resource per period	3.763	1.006
Aggregate	**3.847**	**0.887**

The respondents were further requested to indicate how else supply chain planning influences the performance. They indicated that the effectiveness of any contribution to humanitarian aid is only through a properly equipped supply chain. In addition, the respondents indicated that there is a positive correlation between the presence of the supply chain and the scope of service delivery to the people by the humanitarian organizations. Further, the respondents identified maintenance of good customer relations, efficient and efficient internal operations, continuous improvement, flexible production processes, the use of information technology to accelerate humanitarian work, inter-organizational integration and the simplicity of internal operations, which are common practice among humanitarian organizations. These statements are supported by the findings of Abdifatah (2013) who found that there is a positive and significant relationship between supply chain planning and the performance of INGOs.

Strategic Sourcing and the Performance of INGOs

The second objective of the study was to assess the effect of strategic sourcing on the performance of INGOs in Kenya. From the results, the respondents agreed that potential suppliers are identified before they are selected (M= 3.987, SD=0.753). In addition, the respondents agreed that suppliers define their specifications of the items to be supplied before they are selected (M= 3.980, SD=0.967). Further, the respondents agreed that most of the organization suppliers are committed to supply the needed goods (M= 3.976, SD=0.996). The respondents also agreed that supplier commitment ensures that the supplies are of high quality (M= 3.952, SD=0.989).

As shown in the results, the respondents agreed that all the suppliers are considered during selection of suppliers (M= 3.879, SD=0.845). Further, the respondents agreed that supplier Negotiations determines the supplier who will provide the right quality at the right price (M= 3.845, SD=0.856). The respondents also agreed that supplier Negotiation enhances the development of credibility and trust between the supplier and INGOs (M= 3.724, SD=0.812). In addition, the respondents agreed that the organization carries out a transparent supplier negotiation, (M= 3.643, SD=0.897). Further, the respondents agreed that supplier negotiation work towards a positive outcome for all parties, (M= 3.563, SD=0.978).

Table 2: Strategic Sourcing and the Performance of INGOs

	Mean	Std. Deviation
All the suppliers are considered during selection of suppliers	3.879	0.845
Suppliers define their specifications of the items to be supplied before they are selected	3.980	0.967
Potential suppliers are identified before they are selected	3.987	0.753
Supplier Negotiation enhances the development of credibility and trust between the supplier and INGOs	3.724	0.812
Supplier Negotiation work towards a positive outcome for all parties	3.563	0.978
The organization carries out a transparent supplier negotiation	3.643	0.897
Supplier Negotiations determines the supplier who will provide the right quality at the right price	3.845	0.856
Supplier commitment ensures that the supplies are of high quality	3.952	0.989
Most of the organization suppliers are committed to supply the needed goods	3.976	0.996
Aggregate	**3.839**	**0.809**

The respondents were further requested to indicate how else strategic sourcing influences the performance of INGOs in Kenya. From the results, the respondents indicated that strategic sourcing is a cornerstone of active procurement management. Further, the respondents revealed that strategic sourcing helps in meeting the needs of customers through proactive and scheduled market analysis of supply with the goal of providing solutions to pre-determined and agreed business needs. The respondents further revealed that supply partnerships are formed to promote mutual benefits and ongoing participation in one or more key strategic areas such as software, services and markets. Strategic partnerships with suppliers enable companies to work more closely with a few major suppliers who are willing to share responsibility for the quality of their customers. These statements are in line with the findings of De and Bouchikhi (2014) who revealed that strategic sourcing influences organization performance.

The Performance of INGOs

From the results, the respondents agreed that organization undertakes supply chain management within the set time lines (M= 3.972, SD=0.872). In addition, the respondents agreed that the organization offers quality of services (M= 3.983, SD=0.798). Further, the respondents agreed that the staff in the organization are committed to ensure effective

delivery of services (M= 3.971, SD=0.876). The respondents also agreed that the organization meets all the set goals and objectives (M= 3.876, SD=0.981).

As shown in the results, the respondents agreed that the organization aims at cost reduction in all operations (M= 3.849, SD=0.987). Further, the respondents agreed that their organization has improved the living standards of residents. (M= 3.821, SD=0.897). The respondents also agreed that the organization has well defined supply chain policies (M= 3.786, SD=0.921). In addition, the respondents agreed that the beneficiaries express their satisfaction with our organization's services, (M= 3.598, SD=0.873).

Table 3: The Performance of INGOs

	Mean	Std. Deviation
The organization offers quality of services	3.983	0.798
The organization meets all the set goals and objectives	3.876	0.981
The organization has well defined supply chain policies	3.786	0.921
The beneficiaries express their satisfaction with our organization's services	3.598	0.873
The organization aims at cost reduction in all operations	3.849	0.987
The staff in the organization are committed to ensure effective delivery of services	3.971	0.876
Our organization has improved the living standards of residents	3.821	0.897
Our organization undertakes supply chain management within the set time lines	3.972	0.872
Aggregate	**3.857**	**0.900**

Inferential Statistics

Correlation Analysis

Table 4: Correlation Coefficients

		Performance of INGOs	Supply Chain Planning	Strategic Sourcing
Performance of INGOs	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	164		
Supply Chain Planning	Pearson Correlation	.883**	1	
	Sig. (2-tailed)	.001		
	N	164	164	
Strategic Sourcing	Pearson Correlation	.882**	.297	1
	Sig. (2-tailed)	.002	.066	

	N	164	164	164

From the results, there was a very strong relationship between supply chain planning and the performance of INGOs in Kenya (r = 0.883, p value =0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings are in line with the findings of Mohamed (2012) who revealed that there is a very strong relationship between supply chain planning and the performance of INGOs.

In addition, the results revealed that there was a very strong relationship between strategic sourcing and the performance of INGOs in Kenya (r = 0.882, p value =0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Andebe (2013) who revealed that there is a very strong relationship between strategic sourcing and the performance of INGOs.

Regression Analysis

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.910[a]	.828	.829	.09956

a. Predictors: (Constant), supply chain planning, strategic sourcing

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.828. This implied that 82.8% of the variation in the dependent variable (the performance of INGOs) could be explained by independent variables (supply chain planning, strategic sourcing, supplier relationship management and inventory management).

Table 6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.11	2	16.055	182.404	.000[b]
	Residual	14.171	161	0.088		
	Total	46.281	163			

a. Dependent Variable: the performance of INGOs

b. Predictors: (Constant), supply chain planning, strategic sourcing

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 182.404 while the F critical was 3.052. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the

influence of supply chain planning, strategic sourcing, supplier relationship management and inventory management on the performance of INGOs.

Table 7: Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.323	0.063		5.127	0.003
	Supply Chain Planning	0.351	0.082	0.352	4.280	0.002
	Strategic Sourcing	0.344	0.088	0.345	3.909	0.001

a. Dependent Variable: The performance of INGOs

The regression model was as follows:

$Y = 0.323+0.351X_1 + 0.344X_2 +\varepsilon$

From the results, supply chain planning has a significant effect on the performance of INGOs in Kenya β_1=0.351, p value= 0.002). The relationship was considered significant since the p value 0.002 was less than the significant level of 0.05. The findings are in line with the findings of Mohamed (2012) who revealed that there is a very strong relationship between supply chain planning and the performance of INGOs.

In addition, the study revealed that strategic sourcing has a significant effect on the performance of INGOs in Kenya β1=0.344, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the findings of Andebe (2013) who revealed that there is a very strong relationship between strategic sourcing and the performance of INGOs.

Conclusions

The study concludes that supply chain planning has a positive and significant effect on the performance of INGOs in Kenya. The study found that demand management, capacity management and needs assessment activities influences the performance of INGOs in Kenya. This implies that improvement in demand management, capacity management and needs assessment activities leads to improvement in the performance of INGOs.

In addition, the study concludes that strategic sourcing has a positive and significant effect on the performance of INGOs in Kenya. The study found that supplier selection, supplier negotiation and supplier commitment influences the performance of INGOs in Kenya. This implies that improvement in supplier selection, supplier negotiation and supplier commitment leads to improvement in the performance of INGOs.

Recommendations

The study findings revealed that organization supply chain planning has a positive and significant effect on the performance of INGOs in Kenya. This study therefore recommends

that the management of the INGOs should ensure demand management and capacity management so as to improve performance of the INGOs.

In addition, the study findings revealed that strategic sourcing has a positive and significant effect on the performance of INGOs in Kenya. This study therefore recommends that the management of the INGOs should ensure effectiveness in supplier selection, supplier negotiation and supplier commitment so as to improve performance of the INGOs.

Suggestions for Further Studies

This study focused on the effect of humanitarian supply chain management practices on performance of INGOs in Kenya. Having been limited to performance of INGOs in Kenya, the findings of this study cannot be generalized to the public sector in Kenya. The study therefore suggests further studies on the effect of humanitarian supply chain management practices on performance of public institutions in Kenya.

Further, the study found that the independent variables (supply chain planning, strategic sourcing, supplier relationship management and inventory management) could only explain 82.8% of the performance of INGOs in Kenya. This study therefore suggests research on other factors affecting the performance of INGOs in Kenya.

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