

**SUPPLIER SELECTION CRITERIA AND SUPPLY CHAIN PERFORMANCE
IN NON-GOVERNMENTAL ORGANIZATION'S IN KENYA**

BY

NG'ANG'A HILDAH WAMBUI

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DECLARATION

This research project is my original work and has not been presented for a degree in any other university

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Hildah Wambui

D61/76078/2012

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Date

This research proposal has been submitted for examination with my approval as University Supervisor

.....

Mr. Akelo Ernest O

University Supervisor

.....

Date

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I would like to express my appreciation to my supervisors Mr. Akelo E.O and Dr, Magutu Obara who had the attitude and substance of genius in directing and constructively criticizing my work. I owe special thanks to them for their insightful guidance and support which resulted in successful completion of the study.

I wish to offer my utmost thanks to the Almighty for giving me the strength, health, sound mind and all that He provided during this period. Know it's in Him, by Him and through Him that I came to the completion of this program in good time, thank you God.

I am also grateful to each and every respondent who took their time to fill the questionnaires thank you.

DEDICATION

This project is dedicated to my dear parents Mr. & Mrs. Peter Njenga for instilling in me the virtue of hard work from a very early age. This also goes to my sisters Nyambura and Wambuku, my niece Nadia and all my friends for their moral support.

ABSTRACT

The Non- Governmental Organization plays a key role in Kenya's development. That's why many NGO's have deployed strategies in the management of their supply chain. These strategies include the criteria in which the NGO's select their suppliers'. Selection of suppliers is a process that involves multi-objective decision, encompassing many tangible and intangible factors in a hierarchical manner and the applicability of the criteria used will depend on the product or service produced and the market for which these products or services is targeted. A robust decision should be made once the selection criteria are compatible with the organization competitive strategy since it's possible to achieve an alignment between the two its goals and objectives. NGO's aim of making the best decisions in choosing a criterion is to optimized supply chain performance

The overall objective of this research was to determine the factors that affect supplier selection decisions and also to establish the relationships between supplier selection criteria and supply chain performance of NGO's in Kenya. The study focused on only 48 highly active NGO's in Kenya from a population of 2,507 NGO's available in Kenya. Descriptive research design and proportionate random sampling were used to achieve the results. In this paper a set of supplier selection decision was adapted to design the questionnaire for practical survey. The questionnaire was designed to find out the relationship supply chain performance and selection decision. Data was analyzed using SPSS software version 21 for windows. The results confirmed that supply chain decisions play a very important role in agreement with the criteria aligning with the NGO's strategy.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Supplier selection is one of the classic areas of research in supply chain management. In fact, past reviews of literature in supplier selection indicate a strong diversity in the systemic approaches in supplier selection methodology as well as in supplier selection criteria (Ho et al. 2010). Traditionally, vendors are selected from among many suppliers on their ability to meet the quality requirements, delivery schedule, and the price offered. The main purchasing objective was to obtain the lowest possible price by creating strong competition between suppliers, and negotiating with them.

Selection of appropriate suppliers is one of the fundamental strategies for enhancing the quality of output of any organization, which has a direct influence on the company's reputation. Despite many multinational corporations' efforts to implement social and environmental issues in their supply chains, a gap exists between the desirability of supply chain sustainability in theory and its implementation in practice (Bowen et al.2001). Globally many companies and multinational corporations make their supply chains more socially responsible by implementing governance mechanisms and practices used by firms to manage relationships with their suppliers with the aim of improving their sustainability performance. This is by implementing the suppliers' assessment tools, codes of conduct and how to collaborate with suppliers (Keating et al, 2008; Anderson & Skjoett- Larsen, 2009).

NGO's in Kenya, and Africa as a whole, have taken gigantic steps to dedicate themselves towards the achievement of the goals outlined by the United Nations

(United Nations, 2011). In order to achieve these objectives, NGO's have aspired to establish a competent structure that ensures efficiency and effectiveness in their service delivery mechanisms (Jordan, 2010). The growth of NGOs has been phenomenal in Kenya mainly because of the ability to deliver emergency relief to vulnerable areas. NGOs in Africa, particularly in Kenya, can reach groups that the government and other agencies cannot and the past development strategies have given NGOs the legitimacy to act on behalf of the poor.

1.1.1 Supplier Selection Criteria

Supplier selection process is a multi-objective decision, encompassing many tangible and intangible factors in a hierarchical manner. The applicability of the criteria used depends on the product or service produced and the market for which these products or services is targeted. In the past, mostly quantitative criteria were being used for evaluating suppliers, after the 1990s, qualitative criteria also started getting prominence. With the further maturity of procurement processes and onset of global procurement, newer evaluation criteria like "culture", "communication barriers", "relationship", "geographical location", "foreign exchange rates", "tariffs or customs duties", "trade restrictions", "quality management systems", and "environmental factors" started gaining prominence.(Cusumano and Takeishi, 1991; Min, 1994; Choi and Hartley, 1996; Smith, 1999; Braglia and Petroni, 2000; Narasimhan et al., 2001; Zsidisin and Siferd, 2001; Sarkis and Talluri, 2006). Suppliers have to be selected carefully, as they can have a very positive or a very adverse impact on the overall performance of the organization. It has been reported that a majority of quality problems of an organization are due to defective material (Heizer & Render, 2006) and carefully selected, competitive suppliers can go a long way in minimizing adverse

impacts and in fact in enhancing positive impacts on the quality of output of an organization.

Supplier selection decision is trivial because it involves a large number of closely interrelated decisions regarding financing, negotiations, distribution, procurements and product quality assurance at the source. Owing to the large number of factors affecting the decision, the decision should be made based on an orderly sequence of steps. Supplier selection criteria for a particular product or service category should be defined by a “cross-functional” team of representatives from different sectors of the organization (Rajan, 2006). The criterion to use in selecting suppliers has to be examined extensively. In Modern business world, many firms prefer a strategy of few suppliers (Chandra & Kumar, 2000). This implies that a buyer wants to have a long-term relationship and the cooperation of a few dedicated suppliers.

According to Simpson et al. (2002) selecting and assessing suppliers involves both their information and process dimension. The information dimension focuses mostly on criteria to be used in selecting assessing decisions. While the process dimensions involves developing and implementing corresponding decision making processes. Re-configuration of the supply base helps NGO's in finding ways to improve availability, quality, innovation, and accessibility of the product in a more secure market at lower prices for the developing nations.

1.1.2. Supply Chain Performance

According to Green & Inman (2005) supply chain performance is the ability to deliver quality products and services in precise quantities and at precise times with the aim to minimize total cost of the products and services to the ultimate customers of the

supply chain. Supply chain performance depends upon the agility, adaptability, and alignment of the supply chain partners in which supply chain strategy is positively related to overall performance of the supply chain (Lee, 2004). Strategies that strengthen the competitive position of the supply chain serve to directly enhance supply chain performance, which will, in time, positively impact performance at the organizational level for each supply chain partner.

According to Vanderhaeghe and de Treville (2003) Supply chain performance is dependent on the supply chain partners' ability to adapt to a dynamic environment. Although organizational managers are ultimately held accountable for organizational performance; organizational success first depends upon the performance of the supply chains in which the organization functions as a partner. Supply chain performance is optimized only when an "inter-organizational, Inter-functional strategic approach is adopted by all partners operating within the supply chain (Chopra & Meindl. 2004). Strategies that strengthen the competitive position of the supply chain serve to directly enhance supply chain performance, which will, in time, positively impact performance at the organizational level for each supply chain partner. Supply chain performance is relatively difficult to measure by its nature but it can be identified by the satisfaction of immediate rather than the ultimate customers (Green et al. 2008).

The ability to provide information connections across the supply chain allows supply chain partners to share knowledge about plans, requirements, and status resulting in improved supply chain performance (Zhang et al. 2006). The sharing of information supports collaboration among the supply chain partners, and collaboration is also key to the supply chain's ability to respond (Thomas, 2008; Lee et al., 2008)

According to Beamon (1996) he has placed emphasis on three separate types of supply chain performance measures and these are resource, output, and flexibility measures. Resource measures inventory levels, personnel requirements, equipment utilization, energy usage, and cost. Resources are generally measured in terms of the minimum requirement (quantity) or a composite efficiency measure. Efficiency measures the utilization of the resources in the systems that are used to meet the system's objectives. Output measures customer responsiveness, quality, and the quantity of final product produced. Flexibility, which is seldom used in supply chain analysis, can measure a system's ability to accommodate volume and schedule fluctuations from suppliers, manufacturers, and customers.

1.1.3. Non Governmental Organizations in Kenya

In the past two decades, governments throughout the developing world have seen an explosion in the number of both foreign and local non-governmental actors (NGOs) providing social services in their territory. In Kenya, NGO growth has truly been increasing since 1974; there were only 125 NGOs in Kenya. By 1990, there were over 400 registered with the government, soaring to nearly 3000 in 2007 (NGO Coordination Bureau 2006). While most of these non-governmental actors are not directly hostile to the state, they are providing welfare and other services that are traditionally associated with and often explicitly promised by governments in Africa such as education, health care, child and women's assistance, agricultural extension services, employment, and even in some cases, roads, wells and other infrastructure.

NGOs influence government offices and employees to improve the quality of services they provide. In so doing, NGOs and government both see the role of NGOs as "gap-filling," complementing the state. Contrary to some claims, NGOs are not

replacing the government in service provision (Owiti et al. 2004). Instead of supplanting, NGOs supplement. NGOs have impacted the territoriality of the state by providing services in places that the government has been unable to reach, particularly in arid, sparsely populated areas, where the NGOs per capita ratio is highest.

Moreover, NGOs have influenced governance strategies within public administration. Individuals and departments in government have learned from NGOs, and have begun to mimic the tools they have seen NGOs use successfully for years, calling for participatory development and civic education so that their agencies can better serve the community (World Bank, 2014). Most NGOs in Kenya are involved in one or more of the following eight types of activities: agriculture, education, environment, general development, peace and governance, health, emergency or refugee relief, and programs directed at disadvantaged communities (specifically women, children, youth, the disabled and the elderly). Indeed, most NGOs in Kenya – whether established within the country by Kenyan citizens or abroad and are funded via international sources or local private sources.

1.2 Statement of the Problem

Review of supplier selection criteria makes it a very good topic for operations and management science disciplines. In fact in Kenya NGO's, there has been no such studies, of which has focused on a multi-industry review of supplier selection criteria and their importance, even with a different approach. This is due to lack of literature with a similar objective and high complexity of analysis with evolving theories often not suitable to accommodate the modifications and the analysis needs. According to Ho et al. (2010) indicates the presence of over 60 evaluation criteria, the usage of which have been done selectively across different studies based specific requirements.

The objective of this study was to identify and then estimate the relative importance of the critical evaluation during the supplier prequalification stage. The challenge faced was that the scholars did not attempt to identify the supplier evaluation criteria which are important across industries and across purchasing context's.

Beamon (1996) identified and evaluated various individual supply chain performances. In which he concluded that significant weaknesses were present in each of the performance measures evaluated, based on such criteria as inclusiveness, universality, measurability, and consistency. Repeatedly, the most consistent weakness for these performance measures was inclusiveness. In order for a performance to be inclusive, it must measure all pertinent aspects of the supply chain. Consider an example in which a company decides to use cost as the measure of supply chain performance. Although the supply chain may be operating under minimum cost, it may simultaneously demonstrate poor customer response time performance, or lack flexibility to meet random fluctuations in demand. However he maintained that the company may determine its performance in meeting its strategic goals and people in the organization will concentrate on what is measured; thus steering company direction.

Green et al. (2008) focused on satisfaction of ultimate customers of the supply chain. By its nature, supply chain performance is relatively difficult to measure. Previous measures identified in the literature have measured satisfaction of immediate, rather than ultimate, customers. While measurement of satisfaction of the ultimate customer is appropriate, there is concern whether or not a single supply chain manager within an individual company can properly assess both organizational and supply chain performance. However output performance must not only correspond to the

organization's strategic goals, but must also correspond to the customers' goals and values, since strategic goals generally address meeting customer requirements.

The highlighted literature clearly points out that a gap exists between desirability of supply chain sustainability in theory and its implementation in practice. The researchers have not taken enough perspective into the dimensions of suppliers' selection criteria within the context of Non Governmental Organizations (NGO's) in an African setting. Despite the many techniques that have been developed, researchers admit that there are still major challenges affecting the selection process. The underlying challenges facing the selection of suppliers and criteria used are far from being fully enumerated and thus much is yet to be researched and the gap remains very large. This study will seek to analyze the factors affecting suppliers' selection criteria in non- governmental organizations in Kenya.

1.3 Objectives of the study

The main purpose of this study is to examine criteria used by NGO's in Kenya in selection of suppliers.

1.3.1 Specific Objectives

The research has the following objectives:

- i.** To determine the factors that affect supplier selection decisions by the NGO's in Kenya
- ii.** To establish the relationships between supplier selection criteria and supply chain performance of NGO's in Kenya

1.4. Value of the Study

Non-Governmental Organizations (NGO's) play a pivotal role in Kenya's economy. They contribute immensely in the areas of social development, civil advocacy, poverty eradication and act as a catalyst to politic progression. This research will benefit several stakeholders:

The study will come up with ways of improving suppliers' selection and establish the major pitfalls that have negative influence on the suppliers' selection in the NGO. The management stands to benefit from the information provided in the study as it will form basis for evaluating the current situation and developing the necessary strategies that will work to ensure efficient and effective suppliers' selection.

Supplier selection remains a crucial decision for public NGO's as it determines the efficiency and effectiveness of the firm. This study will thus be of help to other institutions by giving information regarding the underlying factors affecting the suppliers' selection. This study will provide a basis for which the organization can review their tactics and with further give recommendations on the best way to conduct suppliers' selection.

Other scholar seeking to understand the subject under study will also find it of great relevance as it will shed light into the useful strategies, procedures and measuring instruments that are essential to their undertaking. Scholars will use the researcher's findings as a source of knowledge and a base of filling gaps left during the study. This study will further help them to avoid unnecessary duplication, demonstrate familiarity and form a framework within which future research findings will be interpreted.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains the review of theoretical and empirical literature concerning suppliers and selection and performance in the Non- Governmental Organizations (NGO) sector and the presumed variables will give rise to the phenomenon.

2.2 Supplier Selection Decision

Supplier selection is the process by which the buyer identifies, evaluates and contracts with the suppliers. Suppliers are considered the best tangible assets of any organizations that have varied strengths and weaknesses that require careful assessment before order placed (de Boer, 2001). The ability to analyze both the quantitative and qualitative criteria the organization is able to arrive at a robust decision. Supplier selection decisions are often complicated by the fact that multiple criteria, such as price, quality, flexibility, delivery, and service, must be considered in the decision-making process (Dickson, 1966; Hirakubo and Kublin, 1998; Verma and Pullman, 1998; Sarkis and Talluri, 2002; Li et al., 2006).

Trade-offs among criteria has to be made to align the final sourcing decision with competitive priorities and business plans (Hedderich et al. 2005). Sourcing location selection is the first, and thus an important, step in the supplier selection process. Critical factors such as infrastructure, market attractiveness, and cost levels are typically characteristics of regions or countries rather than of specific suppliers (Teng & Jaramillo, 2005). Thus, suppliers within the same area share all the location-

specific attributes, which avoids the need to rank these suppliers on those attributes. After determining where to source, a supplier selection decision within the chosen area can be made. Supplier selection decisions must include strategic and operational factors as well as tangible and intangible factors in the analysis (Sarkis & Talluri, 2002). That's why decision maker can analyze the supplier selection decision in a systematic and scientific approach by means of utilizing the proposed model.

Competition necessitates selecting carefully suitable suppliers for collaboration. It is critical that supplier selection process be able to bring together all of the stakeholders into a common collaboration that generates buy-in and their judgments', comments and evaluation be captured through the process as well. Decision is made from the suppliers who have passed the qualification requirements and are eligible for contracts award.

2.3. Factors Affecting Supplier Selection decision

There are various factors that may affect supplier selection decision. They include the following:

2.3.1 Organization Performance

Organizations have different policies and criteria that they put in place during suppliers selection. Policies are generally adopted by the Board or senior governance body within an organization whereas procedures or protocols would be developed and adopted by senior executive officers. Organization policies can assist in both subjective and objective decision making process. According to Matook et al. (2009) the operational success of organizations policies will often depend on the development of a network of reliable and trustworthy suppliers and consequently,

making the right supplier selection decisions are important. According to Slack and Lewis (2002) if there is a gap of unsatisfactory performance it's assumed the relief organization will adapt their strategies thus dealing with operational decision areas in allocation of resources, level of cooperation and outsourcing in order to be strategic fit between the enablers and requirements of the beneficiaries'.

NGO's have to check on their financial capabilities since financial stability is crucial to their missions and survival their success cannot be measured by how closely their spending matches their budgeted amounts. Financial capabilities of the suppliers are crucial since it will indicate the procurement cost to be incurred by the organization. The firm must therefore find a low-cost supply base where it can minimize its purchase price, import duties, documentation cost, transport cost, communication cost and cost of investigating the potential supplier's past performances and financial background. In this regard, financial stability of the supplier is a necessary requisite for long-term partnership programmes.

Orders should be placed by the national governments depending on their allocated budgets for the product as well as on the epidemiological justifications of the country. On the other end of the chain, competition is quite limited, with only a few manufacturers available. This is due to the strict regulations and high standards for manufacturers to enter the market (Milstien et al. 2005). These regulations are due to the nature of the product being a preventative means towards global health, and thus quality is a critical factor. In evaluating the market of supplies, the quality standards should be first checked. Thereafter, the availability of a purchasing and delivery infrastructure should also be evaluated to see whether sourcing is feasible from the region. Finally, suppliers meeting infrastructure and quality standards should be

evaluated and selected according to previously set criteria of humanitarian aid being of a unique nature implies different motives. Even though achieving lower price is still an important motive in order to make the products affordable for the buyer governments, availability and quality are also of critical importance.

Studies also show that buyers tend to choose their suppliers in a geographical proximity to one another due to various reasons such as raw materials, knowledge, transportation hubs, potential partners, etc. (Bozarth et al., 2007; Wu et al., 2006), which on the contrary makes them prone to the same risks. Thus, Deane et al. (2009) propose a model to capture these associated risks in order to mitigate them in sourcing supplies.

2.3.2. Environmental Performance

Environmental challenges, such as global warming, have demanded greater concern by organizations regarding their environmental management (Boiral, 2006; Lin et al., 2001). However, in order to improve their relations with the environment, these organizations must contribute towards a reduction in environmental impacts from their supply chains, stimulating improvements in their suppliers' environmental performance. The insertion of environmental criteria in the supplier selection process for a given firm will be proportional to the environmental demand of final consumers (Vachon & Klassen, 2006) Firms have recognized the need to develop strategies that extend their traditional corporate governance processes beyond the firms' boundary to their supply chain partners (Kytte & Ruggie, 2005). The most visible indicator of this extension is the emergence of corporate social responsibility oriented purchasing strategies, such as laying down standards that suppliers must meet in order to win business (Keating et al., 2008).

Environmental performance is often related to energy efficiency and the reduction of waste, pollution, emissions, environmental accidents, etc.; social sustainability to labor conditions, diversity, connectedness within and outside the community, quality of life. Svensson (2007) proposed that supply chains should be considered in order to enhance sustainability of on governance mechanisms which extend corporate social responsibility practices to suppliers. Accordingly, by governance mechanism are those practices used by firms to manage relationships with their suppliers with the aim of improving their sustainability performance.

2.3.3 Government Performance

In making the decision on which supplier to choose from in the market, infrastructure availability and compatibility, political stability, and cultural compatibility also become important for government performance. Political stability of governments across the globe affects the performance of businesses operating in that country and therefore their profitability. Before going global organizations should understand the stability of a government with regard to wars, civil regulations that directly impact trade across borders. Managers of global companies should develop a learning strategy to guide both short and long-term professional development, which includes basic knowledge of how different cultures work, what makes them unique, and how managers can work successfully across such environments (Baden et al. 2011). The organization should develop effective, cross-cultural communication skills and negotiating skills across cultures. Should understand how cultural differences can influence the nature and scope of employee motivation, as well as what global managers might do to enhance on-the-job participation and performance.

Government regulations have also played a part in speeding up the globalization process. Favorable trade policies between various governments have doubtlessly promoted international trade Poister (2003). Without the emergence of liberal regulatory environments and protective policies, the globalization of corporate activities such as production sites, research and development would not have occurred. While local labor costs may be significantly lower, companies must also focus on the costs of space, tariffs, and other expenses related to doing business overseas.

Currency exchange rate fluctuations use free trade zones by joining member nations and duty regulations to solve local taxation complexities. It is important for companies to do an analysis of all the costs of crossing National borders before going global and factor it in their budgeting. If the selection is wrong, it may result in mounting material costs, litigation, shoddy product quality, transport delays, production bottlenecks, countertrade obligations, and exchange rate fluctuations – to name just a few of the problems the firm can encounter.

2.3.4 Information Technology Performance

Integration of supply chain activities and the technologies have become competitive necessities in most organizations. Accordingly, the trend toward greater use of supply chain technologies is on a clear path forward. With almost daily technology advancement globally in every facet of the business, organizations need to synchronize by adopting and implementing new electronic commerce and supply chain technology in order to protect market share, not to mention improve market penetration (Blecken & Hellingrath, 2008).

Better information exchange between supply chain partners, is the key advantage of an integrated supply chain provides more up-to-date information and allows for more accurate inventory responses to changes in demand and thus more appropriate inventory levels throughout the supply chain. However, the use of inadequate technology is a major challenge for NGO's supply chain management. Relatively high investment requirements of information technology are not generally justified by NGO budgets. NGO's face challenges in implementation of information technology skills. Kassim and Hussin (2010) noted that the difficulties faced by suppliers are due to tedious procedures and lack of IT skills to perform e-procurement transactions. NGO's may outsource and use various modern technologies for cost savings and quality improvements in which the outsourcing vendor could achieve its return on investments and make sure that the system is performing effectively and efficiently.

2.4. Relationship between Supplier Selection Criteria and Supply

Chain Performance

Selection of appropriate suppliers is one of the fundamental strategies for enhancing the quality of output of any organization, which has a direct influence on the company's reputation since they can have a very positive or a very adverse impact on the overall performance of the organization (Weber et al. 1991). Cooperation between buyer and supplier is the starting point to establish a successful supply chain management and a necessary, but insufficient condition. The next level requires coordination and collaboration between buyer and suppliers.

Suppliers play a vital role in creating a competitive advantage and their actions have a positive impact on the organization's performance. Suppliers with more modern

management practices, such as lean production, have the propensity to become environmentally fit (Simpson & Power, 2005). Members of a supply chain are now preferring to work with those organisations that share the passion and dedication to preserve and nature the environment. The going green concept also promotes a lifestyle of using chemical-free products, recycling, using alternative energy sources such as solar and wind, and reducing dependency on fossil fuels for energy.

Successful supply chain management requires effective management of strategic alliances as well as extensive data management capabilities and advanced inter-organizational information systems to enable greater information exchange (Blecken & Hellingrath, 2008). Information and communication technology is a very important strategic factor that acts as a disseminator for process and the flow along with the reducing paperwork and lead times (Tummala et al., 2006). The integration of supply chain in the organization and of key business processes from end user through original suppliers that provide products, services, and information that adds value for customers and other stakeholders is very crucial. Consequently NGO's have to establish accountable, systems and ensure that the sourced supplier has optimal service performance and technical assistance. In choosing the most appropriate supplier, the buyer should assess the length of the supply chain as well as the strength of the supplier's commitment for on-time delivery services expediting services. The supplier's ability to provide the necessary technical assistance must be factored into the international supplier selection decision.

2.5. Theories of supplier selection Decision

2.5.1. The analytic hierarchy process (AHP) Theory

The analytic hierarchy process was developed by Saaty (1980), which is a powerful tool in solving complex decision problems. The AHP helps the analysts to organize the critical aspects of a problem into a hierarchical structure similar to a family tree. By reducing complex decisions to a series of simple comparisons and rankings, then synthesizing the results, the AHP not only helps the analysts to arrive at the best decision, but also provides them with a clear rationale for the choices made (Chin et al., 1999). In the AHP approach, the decision problem is structured hierarchically at different levels with each level consisting of a finite number of decision elements. The upper level of the hierarchy represents the overall goal, while the lower level consists of all possible alternatives.

2.5.2. Multiple Attribute Utility Theory

As indicated in the previous section, international supplier selection is a complex decision-making problem. The complexity stems from a multitude of quantitative and qualitative factors influencing supplier choices as well as the intrinsic difficulty of making numerous tradeoffs among these factors. Multiple attribute utility theory enables the decision maker to structure a complex problem in the form of a simple hierarchy and to subjectively evaluate a large number of quantitative and qualitative factors in the presence of risk and uncertainty. The major strength of Multiple Attribute Utility Theory is its ability to deal with both deterministic and stochastic decision environments (Zionts, 1992).

2.5.3. Data Environment Analysis (DEA) Theory

Data envelopment analysis has been in the literature for vendor performance evaluation. Weber (1996) used DEA to select vendors by considering unit price, percentage of rejects, percentage of late deliveries, business allocation units, etc. He rightfully claimed that DEA is an objective method, contrasted with the usual subjective methods available for vendor selection. However, we feel that combining the objective power of DEA with methods that are very good at handling subjective values such as Analytical Hierarchy Process could potentially enhance the usefulness of DEA. Talluri et al. (2006) used the stochastic version of DEA for evaluating vendor performance. DEA could be advantageously employed to integrate the powers of widely employed objective (namely TCO) and subjective (namely AHP) methods for vendor evaluation.

2.5.4. Multi-objective programming (MOP) Theory

According Ellram, (1990) to model that helped the buyer find a set of “best compromise” solutions for suppliers to be selected, and the purchasing volume to be allocated among suppliers. Consequently, the MOP model has the capability to solve both supplier selection and volume allocation problems, while aiding the buyer in assessing trade-offs among total purchasing cost, late delivery and the percentage of rejected items.

2.6. Empirical Review

A study by Koh et al. (2007) cooperation between buyer and supplier is the starting point to establish a successful supply chain management and a necessary, but insufficient condition. Collaboration between buyer and supplier includes specified

work-flow, sharing information through electronic data interchange and the internet, and joint planning and other mechanisms that permit to carry out the just in time system and total quality management in the company (Spekman et al. 1998). Leenders et al. (1993) NGO's have started developing strategic partnerships or alliances with their suppliers based on long-term contracts, mutual support, non-adversarial negotiations, and information and risk sharing. To maintain long-term partnerships with the supplier, they are motivated to use the following attributes: Financial stability of the supplier regardless of cost savings. Supplier's shaky financial situation will gradually weaken the long-term business relationship with the buyer.

Recent studies by Tomasini and Van Wassenhove (2009) which was done in Canada suggest that collaboration with businesses (e.g. logistics service providers) and local communities can make a difference in delivering the goods, developing capabilities, and reducing vulnerabilities. Buyers should carefully consider the supplier's negotiation flexibility when making sourcing decision. Vonderembse and Tracey (1999) observed that supplier selection tactics positively impact a buying firm's manufacturing performance. They also demonstrated that high performing companies attach greater importance to key supplier selection criteria such as quality and delivery performance than low performing companies. They did not however attempt to relate supplier selection to broader measures of business performance.

While Cruz (2009) found that some believe that regulation of social and environmental performance should be carried out by government, others believe that it should be carried out by customers. Based on the findings from this study, we suggest that there are significant differences between institutional pressures and Government pressures because of the highly established regulatory frameworks in

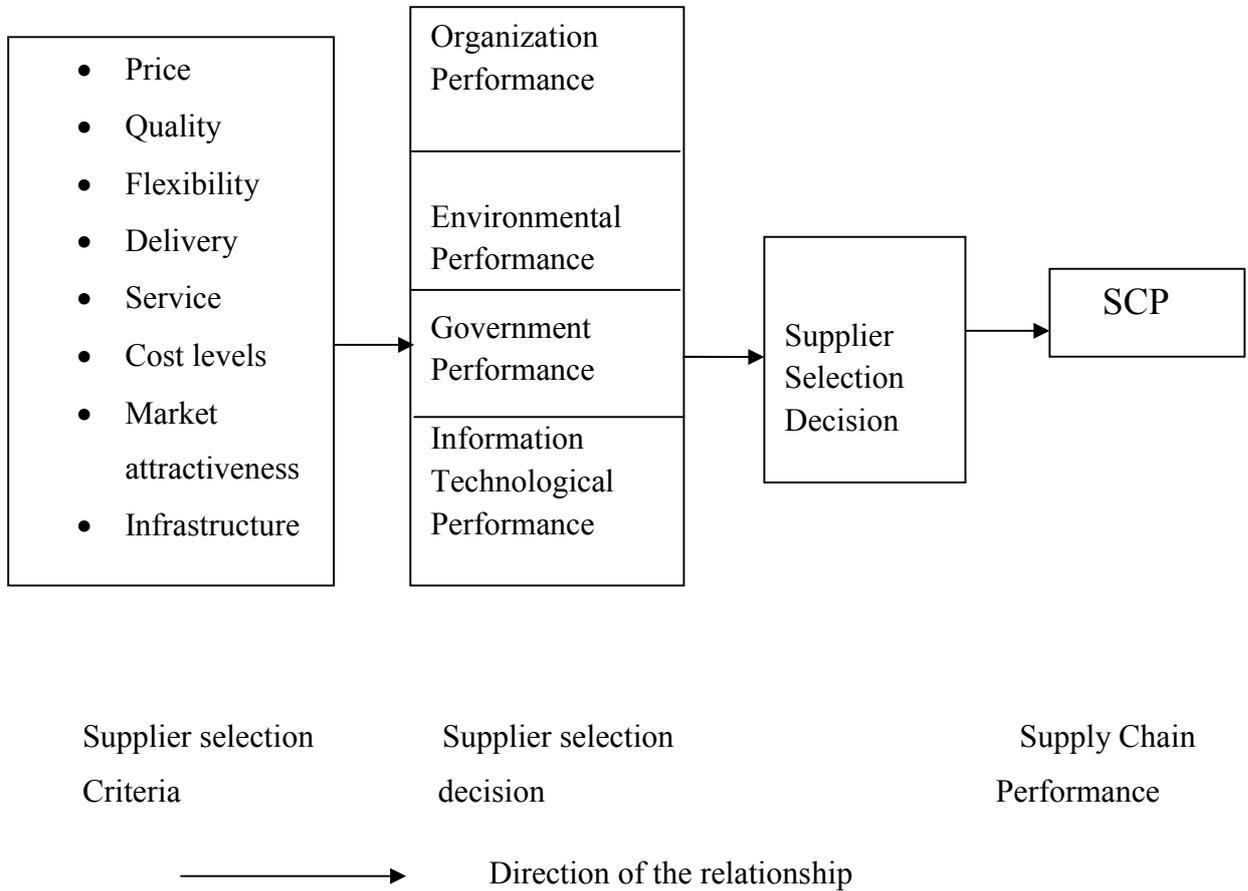
developed countries in terms of factors such as health and safety, taxation, insurance, etc.

Bowersox and Daugherty (1995) observed that lately, as firms realize the advantages gained from efficient and effective supply chain operations, managers begin to incorporate supply chain strategy into their overall corporate strategy which then leads to greater technology adoption and electronic integration. Previous research suggests that better performing firms have a tendency of strategic persistence and adopt fewer strategic changes than poorer performing firms. Considering information management systems have become essential components of firm strategy, poorer performing firms would be more likely to adopt new technology.

2.7. Conceptual Framework

A variable is a measurable characteristic that assumes different values among the subjects (Mugenda & Mugenda, 2008). It is a variable that a researcher manipulates in order to determine its effect or influence on another variable. Independent variables are also called predictor variables because they predict the amount of variation that occurs in another variable (Kothari, 2008). It is sometimes called the criterion variable, attempts to indicate the total influence arising from the effects of the independent variable (Kothari, 2008). A conceptual framework is used in research to outline possible courses of action or to present a preferred approach to an idea or thought. These variables and their relationships are illustrated in the following figure below:

Figure2.1. Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter represents the method that was used to collect data, analyze and interpret data. It further provides information regarding the target population, sample size, sampling design, data collection instruments and procedures, and the techniques for data analysis.

3.2 Research Design

A descriptive survey design was used for the purpose of this study. With such a study, information's were obtained to meet the underlying purposes and objectives of the study. This kind of design well suits the study as it presents the situation as it is and the researcher has no control over the variables. According to Kothari (2005), descriptive survey design includes surveys and fact findings enquiries of different kinds. Hence the survey will be considered to be more efficient and economical.

3.3 Population of the Study

The population of this study included all Non Governmental Organizations based Nairobi, Kenya. Robson (2002) explains research population as the universe of elements from which the sample elements are drawn. Population is therefore the entire group of individuals upon which a sample will be picked from the study. There are 2,507 NGOs in Kenya (Jordan, 2010). Due to their high numbers; the study focused only on the 48 highly active NGO's in Kenya as the target population

according to various sectors under which they operate as provided in appendix II (<http://reliefweb.org>,2014).

3.4 Sample Design

Proportionate random sampling method was used to select a sample size, since the population is of different Non Governmental Organizations was considered heterogeneous, implying that a simple random sample will not be a true reflection of the study population (Cooper & Schindler, 2006). The study picked head of logistics department from each of the Non Governmental Organization.

Table3.1. Sectors of the NGO's

Sectors	NGO's Per sector	Sample Size
Educational based	120	9
Agriculture and water	560	5
Gender	260	3
Humanitarian	480	10
Environmental	220	7
Culture	330	4
Poverty Elevation	480	2
ICT	197	5
Conflict Resolutions	340	3
Total	2,507	48

3.5. Data Collection

Primary data was used through a self-administered questionnaire consisting of both open and closed ended questions that will be designed to elicit specific responses for qualitative and quantitative analysis respectively. The questionnaire is divided into three sections. Whereby section 1 focused on the demographics of different NGO's characteristics. Section II focused on the first objective and it's divided in into 4 subsection where A is Organization performance, B environmental performance, C is Government Performance and D is Information Technology Performance. While section III focus on the relationship between supplier selections criteria and supply chain performance. The questionnaires were administered to the randomly selected respondents and a drop and pick later method was used.

3.6 Data Analysis

According to Kothari (2005), data analysis procedure includes the process of packaging the collected information putting in order and structuring its main components in a way that the findings can be easily and effectively communicated. Regression will be used to show the relationships between the supplier selection criteria and supply chain performance. In order to meet the objectives, data was analysed and tested so as to draw on the conclusion on the variables in the study. After the fieldwork, before analysis, all questionnaires were adequately checked for reliability and verification. The findings were presented using percentages, frequencies, mean scores and tables. The following regression formula will be used:

- $S = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$

Where: S = Supply chain performance

a = The S intercept when x is zero

b1 b2 b3 and b4 are regression weight attached to the variables.

X_1 = Organizational Performance

X_2 = Environmental Performance

X_3 = Governmental Performance

X_4 = Information Technological Performance

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter is divided into introduction, response rate, quantitative analysis, qualitative analysis, conclusion and summary. Suggestions for further research have been given in a concluding statement in the context of supplier selection criteria and its performance in NGO's in Kenya. The research findings were presented in form of tables.

The findings are based on the responses from the questionnaires filled and information gathered on the research questions. The researcher administered 48 questionnaires to randomly selected respondents. Out of the 48 questionnaires that were given to the different population categories in NGO's 85% responded while 15% did not respond. The remaining respondents who were not able to give back the questionnaire, some were at the field at the time of collecting the questionnaire; others had not completed answering the questionnaires given. Therefore response rate was high.

4.2. Demographics

The demographics information is organized in the following areas: gender of the respondents, the number of years the respondent has worked in the organization and the job title of the respondents.

4.2.1 Gender of the Respondents

Table 4.1: Gender of the respondents in NGO's

Gender	Frequency	Percentage	Cumulative Percentage
Male	29	66	66
Female	15	34	100
Total	44	100	

From the above findings it was established that most of the respondents were male (66%) while the female respondents were (34%). This indicates the number of male respondents to be more than that of the female respondents and thus the majority of the responses in each of the categories. This was done to get the response rate from both the male and the female and to avoid gender imbalance.

4.2.2. Job Title of the Respondents

Table 4.2: Respondents Job Title

Job Title	Frequency	Percentage	Cumulative Percentage
Managers	13	30	30
Procurement Officers	31	70	70
Total	44	100	

This revealed that 70 % of the respondents were working as the procurement officers while 30% as the managers of the NGO's. This implies that the researcher was able to collect information from the two levels/ job titles of the respondents.

4.2.3. Respondents Work Experience

Table 4.3: Job Experience of the Respondents

Years of Experience	Frequency	Percentage	Cumulative Percentage
Less than 3 Years	7	15.9	15.9
3-5 Years	10	22.7	38.6
6-10 Years	14	31.8	70.4
10 years and above	13	29.5	100
Total	44	100	

The results indicated in table 4.3 reveals that 31.8 % of the respondents had a working experience between 6-10 years, 29.5% of the respondents had a working experience of more than 10 years, 22.7% of the respondents had a working experience between 3-5 years and 15.9% had working experience of less than 3 years. This implies that the researcher was able to collect information from at least all levels of job experience ranging from less than 3 years to those with 10 years and over. Therefore there was no biasness to those who have worked for a certain period of time.

4.3 Supplier Selection decisions

4.3.1 Organizational Performance

The study was interested in finding out the relationship between organization performances in relation to supply chain. To achieve this objective, the questionnaires were structured according to the performance on the organization. This is in terms of: policies of the organization, financial stability, supplier's partnership with the organization, contracting the suppliers and challenges experienced with the structures of the organization.

Table 4.4. Organizational performance

No	Indicators	N	Mean	Sd
1	How do you rate the level of organization policy in the organization?	44	2.8	2.5
2	To what extent does organization policy affect supplier selection criteria?	44	2.6	2.33
3	Financial stability of the supplier is it a necessary requisite for long term partnership within the organization?	44	3.1	2.98
4	Is the organization able to adopt supplier partnership in order to improve business knowledge and performance?	44	2.9	2.83
5	Is the organization able to analyze suppliers before contracting them	44	2.5	2.2
6	Do you experience any challenges in the selection of the suppliers?	44	2.6	2.33
7	Does the organization experience challenges as a result of the structures and systems within the organizations?	44	2.9	2.83

4.3.2 Environmental Performance

The extent on which NGO's may manage their environmental performance. To achieve this objective, the questionnaires were structured according to the organization performance in terms of effective procurement processes, insertion of the environmental criteria, modern management practices, and environmental fit governance mechanism, self satisfaction in the preservation of the environment, attainment of the ISO and also challenges in the environment.

The extent on which environmental performance has on supply chain

Table. 4.5. Environmental Performance

NO	Indicators	N	Mean	Sd
1	Has the attainment of ISO by the organization has it increased its loyalty with its suppliers?	44	3.6	4.3
2	Does the organization have environmental fit governance mechanism in managing relationships with their suppliers?	44	2.8	3.84
3	Do you experience challenges from the employees and the internal environment?	44	2.5	3.44
4	The insertion of environmental criteria in the supplier selection process is it proportional to the environmental demand of final consumers?	44	3.0	3.97
5	Is there self satisfaction in the preservation of the environment?	44	2.9	3.9
6	Suppliers with more modern management practices, such as lean production, do they have the propensity to become environmentally fit?	44	2.9	3.9
7	To what extent do you consider environmental performance on supplier selection criteria to effective on procurement processes?	44	3.1	3.87

The study sort to establish the extent on which the environmental performance may have on the supply chain in the selection of their suppliers. Majority of the respondents on the great extent was due to attainment of the ISO by the organization and this was mainly due to increase of its loyalty with its suppliers. A number of the respondents recommended that environmental performance on supplier selection criteria its effective on the processes of procurement process. This was mainly due to recognize the need to develop strategies.

4.3.3. Governmental Performance

The study was interested in finding out the relationship between the governments and NGO's in relation to supply chain performance. Aspects focused on this section were: Political stability, trade regulations, provision of enough security, globalization processes, support of the smooth operations of the NGO's and free and fair trade .

Table 4.6. The extent on which governmental performance has on supply chain

No	Indicators	N	Mean	Sd
1	Does the government support free and fair trade regulations that will facilitate procurement process?	44	3.55	0.52
2	How can you rate political stability of Kenya?	44	4.8	0.81
3	Is the government able to support the NGO's in their operation and the challenges that they face?	44	3.9	0.61
4	Is the government able to support the NGO's in their operation and the challenges that they face?	44	4.67	0.76
5	Do the government regulations play part in speeding up the globalization process?	44	3.8	0.59
6	To what extent is the prevalence of the government involvement in international trade much greater than in the home trade?	44	4.5	0.76
7	Is there enough security provided for all residents and non residents in the country?	44	3.50	0.53

From the table above it shows majority of the respondents recommended that political stability in Kenya is Key to NGO's growth since majority of them will be able to provide their humanitarian support in the country. They further suggested that the government should be involved in global trade to enhance a learning strategy to guide

both short and long-term professional development. A significant number suggested that the government should support the operations of the NGO's by solving and controlling currency exchange rate fluctuations and use of free trade zones by joining member nations and duty regulations to solve local taxation complexities. While the lowest ranked suggestion was that the government does not support free trade regulation that may facilitate procurement process.

4.3.4. Information Technological Performance

Aspects focused on this section were technical knowledge, better information exchange, and level of technological advancement, facilitation of information flow, sufficient resources and sufficient resources to monitor the process of supply chain. The objective of this aspects will enable us know the extent to which information technological advancement will have on the performance of the procurement processes.

Figure4.7. Technological performance

No	Indicators	N	Mean	Sd
1	To what extent does lack of technical knowledge and resource inhibit technological adoption?	44	4.0	0.70
2	Is there better information exchange between the suppliers and the organization?	44	3.8	0.82
3	How do you rate the level of technological advancement in your organization?	44	3.79	0.81
4	Does the NGO have sufficient resources to monitor the process of supply chain?	44	3.9	0.90
5	Has adoption of IT facilitated information flow within the departments thereby improving quality of information sharing?	44	3.79	0.81
6	Integration of technology into business operation facilitates opportunities for the organization faster process?	44	3.3	0.70

The result on the extent on which information technology may have on the performance in the selection of suppliers is as summarized. Majority of the respondents rated that lack of technological knowledge may inhibit NGO's to adopt it in the organization. Since this may require the donors to spend more funds in the training of the staff in the organizations. A number of respondents think that when there is better information exchange there will be easier and better procurement process. It's also easier for NGOs to monitor their procurement processes since majority of the organizations has sufficient resources provided by the donors to monitor the supply chain.

4.4. Regression Analysis

In this study, multiple regression analysis was conducted to test the influence among the predictors. The research used statistical package for social sciences to enter and compute the measurement of the multiple regressions. Regression analysis shows the relationships supply chain performance and supply chain decisions. This is explained by the correlation explained in the figure below.

4.4.1. Model Summary

Table 4.8 Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.332(a)	.110	.625	.002

Source: Author (2014)

R – Squared is commonly used statistic to evaluate model fit. R^2 is 1 minus the ratio of residual variability. The adjusted R^2 also called the coefficient of multiple

determinations is the percent of the variance in the dependent or jointly the independent variables. 62.5% of variance in the supply chain performance and this seen as the variables of supplier selection decision as a result of supplier selection criteria in the performance of the NGO's. It's therefore true to conclude that the criteria selected is crucial in making supplier selection decision.

4.4.2. Analysis of Variance (ANOVA)

The following table provides information about levels of variability within the regression ANOVA shows the importance of the relationship between the independent and the dependent variables.

Table 4.2 Summary of One-Way ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.157	4	0.0393	0.1115	.001(a)
	Residual	1.410	44	.03205		
	Total	1.567	48			

Source: Author (2014)

One way ANOVA was used to test for preferences differences among three variables for 5 % levels of significant in predicting how organization, governmental, environmental and information technology affected supply chain performance. The F calculated at 5% level of significance was 0.1115. Since F calculated is lower than the F critical, this shows that the model is insignificant.

4.4.3. Test for Coefficient

Holding other factors constant, an increase in one unit of the independent variable results into an increase in the dependent variable. This is explained in the table below.

Table 5.0. Test for Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	SCP (Constant)	1.014	0.142		2.10	.000
	Organizational Performance	.481	.355	-.201	.249	.003
	Environmental Performance	.223	.102	.102	-.245	.002
	Governmental Performance	.051	.104	.417	.109	.001
	Information Technology Performance	.002	.110	.691	.131	.005
a. Dependent Variable: Supply Chain Performance						

Source: Author (2014)

The equation ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$) becomes :

$$Y = 1.014 + 0.481 X_1 + 0.223 X_2 + 0.051 X_3 + 0.002 X_4$$

Where Y is the dependent variable (Supply Chain Performance), X_1 is Organizational Performance, X_2 is Environmental Performance, X_3 is Governmental Performance and X_4 is Information technological Performance.

According to the regression established the researcher was interested in comparing the contribution of each variable that is taking all factors (Organizational, Environmental, Governmental, and Technological performance) it will be 1.014. In this case the

researcher uses the Beta values and chooses the highest of them which is 0.481. This indicates the variable that makes the strongest unique contribution in explaining the relationship between suppliers selection decision and its performance visa vis to access in its organization when the variance explained by all other variables in the model are controlled leading to an improvement in supply chain performance in NGO's.

According to Maskell (1991) suggests that the types of performance measures required for an organization are directly related to its strategy chosen by the company. This is by establishing and maintaining its relationship in determining if its performance is meeting its strategic goals; and the people in the organization will concentrate on what is measured; thus the performance measure will steer company direction. Information technological performance which has a Beta value of 0.002 indicates that it makes the least contribution in the model. This fitted model was diagnosed and found that regression was statistically significant.

4.5. Summary and Discussion of Findings

The study sought to establish the relationship between supplier selection criteria as a result of supplier selection decision in supply chain performance in NGO's in Kenya. The study found that supplier selection decision had a great effect on the criteria which NGO's may choose as shown by the adjusted R^2 which shows that 62.5 % could be attributed to the combined effect of the predictor variables. This means that the context of NGO's being of a unique nature implies different motives on how well performance is also altered and is alleviated to the beneficiaries. This is confirmed by researchers, Luo et al. (2009) and De Boer and Van der Wegen (2003)

rightly argue that the quality of supplier selection decision making is directly dependent on decisions already made in the earlier phases and in the formulation of criteria and prequalification. Fraering and Prasad (1999) noted, the proper sourcing strategy should result in lower purchasing costs and improved financial performance for the firm hence improved supply chain performance in the NGO's. The operational success will depend on the organization performance in the development of a reliable network and trustworthy suppliers and consequently, making the right supplier selection decisions.

The coefficient of organizational performance on the supply chain was 0.48 which was significant ($P = 0.003$). This indicates that there is a positive relationship between supplier selection decision and supply chain performance in NGO's in Kenya. But the results are inconsistent with those of Slack and Lewis (2002) if there is a gap of unsatisfactory performance it's assumed the relief organization will adapt their strategies thus dealing with operational decision areas in allocation of resources, level of cooperation and outsourcing in order to be strategic fit between the enablers and requirements of the beneficiaries' and this may not be a benefit in their performance. Most of the respondents reported that organizational policies affected the supplier selection practices in the organization. Majority said that most of the organization policies put in place actually encouraged or hindered the supplier selection influencing both subjective and objective decision making. They argued that policies were typically instituted to avoid some negative effects that has been noticed in the organization and also to seek some positive benefit hence to improve effectiveness of the procurement process. They all concluded that organization policies had an influence both positively and negatively. It was suggested that the principle, protocols, rules and procedures used should be made clear in order to come up with

decisions that will help achieve rational outcome in the organization. The policies should be developed and adopted at all levels despite the hierarchy. This will increase transparency within the organization in every decisions take by their senior consider contribution from the juniors.

The coefficient of environmental was 0.23 which was significant ($P= 0.002$). The finding shows that the environmental performance is significant determinant to the supply chain. Studies shows that buyers tend to choose their suppliers in a geographical proximity to one another due to various reasons such as raw materials, knowledge, transportation hubs and potential partners. The results are in agreement with findings of Deane et al. (2009) found that risks faced by both the external environment and by the geographic proximity of the selected supplier as an important factor in making sourcing decisions. They further noted that each different location, due to its natural, political, cultural, and economic situation has a different risk proximity that has to be accounted for in choosing the source of supply.

Government performances in term of regional trade agreements, tariff system, trade protection mechanisms, local content requirement, voluntary export restrictions and government procurement policies are also important in maintain NGO's in Kenya due to their openness in the government rules and regulations. Government policies put in place actually encourages or hinders the supplier selection decision. The influence government in the supply chain is important since it can either have both positive and negative effect.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of the findings and discussions of the study. It also covers the recommendations for further studies on related issues on the study not well covered as well as the relationship between supplier selection decision and supply chain performance in NGO's. The study finally addresses the conclusions of this study.

5.2. Summary of the study

The objective of the study was to establish the relationship between supplier selection criteria and supply chain performance in NGO's. Descriptive research design was used to attain this objective. The target population was 48 highly active NGO's in Kenya. From the data 44 of the NGO responded representing 85 % response rate. Descriptive statistics such as percentages was used to summarize the basics features of the data in the study. The statistical package for social sciences (SPSS) version 17 was used to perform the analysis of quantitative data, while regression was used to analyze the strength and the relationship between independent and the dependent variable.

Supplier selection decision was practiced in a moderate extent in NGO's whereby their selection criteria are developed from their strategic plans. Since the overall objective of supplier selection is to have a risk reduction in purchasing, maximizing total purchase value, and building long-term relationships between buyers and suppliers. Effective supplier selection decisions require good processes to evaluate the many factors related on how to find the supplier locations that align best with

future plans. This will often include a screening step with respect to geography, since factors such as infrastructure, market attractiveness, and cost levels are characteristics of regions or countries rather than specific suppliers. All these screening factors frequently lead procurement managers to consider low-cost countries and geographies for their supply needs.

There has been a challenge in which performance metrics and measurement systems which have not been developed in the relief sector. However, NGOs are becoming increasingly aware of the significance and urgency of performance measurement, particularly due to increasing competition in the sector for scarce resources and increasingly high demands from donors and the public to improve visibility and accountability. This is due to the difficulties associated with measuring program outcomes that's why NGOs tend to measure performance focusing on inputs rather than outputs. A key finding from this study, therefore, is that the adoption of formalized supplier selection strategies in a developing economy has played a critical role in eliminating a majority of legacy suppliers from future bidding and that these suppliers will remain excluded until they make changes to their corporate behavior and performance.

Findings also show challenges related to lack of IT skills due to insufficient resources. This may be enhanced by setting aside resources for technological adoption in terms of training the staff in the organization and also monitoring the supply chain. Effective application of information technology to the integration of supply chain activities has the effect of reducing levels of complexity. This will establish the ability to exchange rich information at a comparatively low cost.

This study contributes towards specialized literature by showing that there tends to be a correlation between the level of environmental performance and the level with which that organization inserts environmental criteria in the supplier selection process. Supply chain performance is relatively difficult to measure. Previous measures identified in the literature have measured satisfaction of immediate, rather than ultimate, customers. While measurement of satisfaction of the ultimate customer is appropriate, there is concern whether or not a single supply chain manager within an individual company can properly assess both organizational and supply chain performance.

5.3. Recommendations

Given the increasing importance of outsourcing, one would expect that how suppliers are selected and assessed, and in particular, the criteria used to guide these decisions, will impact the buying organization's performance. A greater onus would exist when suppliers can create value for the buying organization, and that once selected, supplier performance is consistent with the buying organization expectations. Expanding the use of outsourcing will imply that organizations are increasingly becoming reliant on suppliers and must therefore manage them effectively.

5.4. Conclusions and future work

Organizations are increasingly faced with the reality that they cannot exist in isolation but are one piece of a complex chain of business activity. The results indicate well defined linkages between specific practices and performance. Successful management of the supply chain is the key to the long term success of an organization. Suppliers have to be selected carefully, as they can have a very positive or a very adverse impact on the overall performance of the organization. During the supplier selection

process, the managers should take into consideration strategic and operational factors as well as tangible and intangible factors which may enhance the performance of the organization.

Additionally, the decision maker can analyze the supplier selection decision in a systematic and scientific approach by means of utilizing the proposed model. Since an extensive analysis is needed in the entire decision making process, the proposed comprehensive and systematic approach would help purchasing managers in the evaluation of supplier selection.

5.5. Limitations of the study

The finding of this study reflects on supplier selection criteria and supply chain performance in Non Governmental Organizations in Kenya. The findings should be interpreted with caution since they might not be a true representation of what is happening in as far as in selection of suppliers in NGO's in Kenya. Additionally this study was exploratory and the generalizability of the findings might be limited by the sample size of the participants involved. Further studies with large number of respondents would be appropriate.

The quality of data may be a weakness for this study, since it's not possible to tell from this research whether the results are simply due to the nature and quality of data used or whether it is the true picture of the situation. The use of data from various sources is based on the assumption that the data are accurately captured.

5.6. Suggestions for Further Research

Based on the findings of this study there is need to conduct further studies on assessment of the effect of supplier selection criteria practices and their effectiveness

of the procurement process. Further research is also required to study other factor affecting supplier selection method used in Kenya. The study will help to solve problems that surround supplier selection practices in organizations.

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APPENDICES

Appendix 1: Introduction Letter

Dear Sir/Madam,

RE: VOLUNTARY PARTICIPATION IN DATA COLLECTION

My name is Hildah Wambui Ng'ang'a, a post graduate student from University of Nairobi, School of business. I am conducting a study on the supply selection criteria and supply chain performance in NGOs'. Your feedback and views on the mentioned will help in compiling my research. The data collected is for research purposes only and it takes the form of survey which should take no more than 15 minutes of your time. All responses received are anonymous and information collected will not be distributed to any other party.

Thank you for taking time to complete this survey.

Yours Sincerely,

Hildah Wambui Ng'ang'a

APPENDIX II

Data Collection Questionnaire

The researcher seeks to answer the effects of supplier selection criteria in Non Governmental Organizations in Kenya. To achieve this, relevant questions have been provided to gather data for analysis. Kindly spare some time to provide the information as accurately as possible. Any information supplied will be strictly confidential and will be used for academic purposes only.

PART 1: Demographic and Firm Characteristics

1. Name of the Non Governmental Organization
.....
2. Please indicate your job title (Tick as appropriate)

 Manager [] Procurement Officer []
3. Please indicate your Gender (tick as appropriate)

 Male [] Female []
4. Number of Years employed in the NGO

Less than 3 years [] 3 to 5 years [] 6 to 10 years []

More than 10 years []

PART II: Measurement of Objectives

A. Organization Performance

To what extent do you encounter each of the following in managing Performance in your Organizations?

1=Not at all, 2= Little Extent, 3=Moderate Extent, 4= Great Extent and 5=Very great extent

No	Indicators	1	2	3	4	5
1	How do you rate the level of organization policy in the organization?					
2	To what extent does organization policy affect supplier selection criteria?					
3	Financial stability of the supplier is it a necessary requisite for long term partnership within the organization?					
4	Is the organization able to adopt supplier partnership in order to improve business knowledge and performance?					
5	Is the organization able to analyze suppliers before contracting them					
6	Do you experience any challenges in the selection of the suppliers?					
7	Does the organization experience challenges as a result of the structures and systems within the organizations?					

B. Environmental Performance

To what extent do you encounter each of the following in managing Environmental Performance in your organization?

1= Not at All, 2= Little Extent, 3= Moderate Extent, 4= Great Extent and 5= Very Great Extent

No	Indicators	1	2	3	4	5
1	To what extent do you consider environmental performance on supplier selection criteria to effective on procurement processes?					
2	The insertion of environmental criteria in the supplier selection process is it proportional to the environmental demand of final consumers?					
3	Suppliers with more modern management practices, such as lean production, do they have the propensity to become environmentally fit?					
4	Does the organization have environmental fit governance mechanism in managing relationships with their suppliers?					
5	Is there self satisfaction in the preservation of the environment?					
6	Has the attainment of ISO by the organization has it increased its loyalty with its suppliers?					
7	Do you experience challenges from the employees and the internal environment?					

C. Government Performance

To what extent do you encounter each of the following in managing Government Performance in your organization?

1= Not at All, 2= Little Extent, 3= Moderate Extent, 4= Great Extent and 5= Very Great Extent

No	Indicators	1	2	3	4	5
1	Does the government support free and fair trade regulations that will facilitate procurement process?					
2	Do the government regulations play part in speeding up the globalization process?					
3	To what extent is the prevalence of the government involvement in international trade much greater than in the home trade?					
4	How can you rate political stability of Kenya?					
5	Is the government able to support the NGO's in their operation and the challenges that they face?					
6	Is there enough security provided for all residents and non residents in the country?					

D. Information Technology Performance

To what extent do you encounter each of the following in managing Information Technology Performance in your Organization?

1= Not at All, 2= Little Extent, 3=Moderate Extent, 4= Great Extent and 5= Very Great Extent

No	Indicators	1	2	3	4	5
1	Integration of technology into business operation facilitates opportunities for the organization faster process?					
2	To what extent does lack of technical knowledge and resource inhibit technological adoption?					
3	Is there better information exchange between the suppliers and the organization?					
4	How do you rate the level of technological advancement in your organization?					
5	Has adoption of IT facilitated information flow within the departments thereby improving quality of information sharing?					
6	Does the organization have sufficient resources to monitor the process of supply chain?					

PART III: SECOND OBJECTIVE

RELATIONSHIP BETWEEN SUPPLIER SELECTION DECISION AND SUPPLY CHAIN PERFORMANCE

**1= Not at All, 2= Little Extent, 3=Moderate Extent, 4= Great Extent and
5= Very Great Extent**

No	Indicators	1	2	3	4	5
1	Does your organization make supply chain Decisions in time?					
2	Has the organization developed the performance measures and metrics needed to fulfill integrate their supply chain?					
3	Does sharing of information improve supply chain performance?					
4	Is your organization able to contract suppliers quickly?					
5	Does your organization ensure that the supply chain is efficient and effective?					
6	To what extent is quality assurance emphasized on supplier's selection?					

Thank you for your Cooperation