ISSN 2349-7807

International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)
Vol. 4, Issue 4, pp: (85-98), Month: October - December 2017, Available at: www.paperpublications.org

Factors Influencing Supplier Selection in Kenya Rural Roads Authority: Tana River County, Kenya

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***Abstract*: Supplier selection is the process by which firms identify, evaluate, and contract with suppliers. This project describes the typical steps of supplier selection processes: identifying suppliers, soliciting information from suppliers, setting contract terms, negotiating with suppliers, and evaluating suppliers at Kenya Rural Roads Authority, Tana River County (KeRRA).The population of the study is KeRRA suppliers. The desired sample was obtained using random sampling.Data was collected using semi structured questionnaires.Data was analyzed using descriptive statistics that included freqeuncies, percentages and mean. The research findings was presented using tables. The study found that the information request from supplier is obtained through Request for Information (RFI), Open tendering Process, Request for Proposal (RFP) and Request for Quotation (RFQ) by KeRRA. The study also found that among the current practices of supplier evaluation and contract award in Kenya Rural Roads Authority Tana River County to include better Management, Personnel Training, Performance History, Reputation and references, Supplier Location, Environmental and social responsibility, and Safety Awareness. The study concluded that in the selection process KeRRA carries out an identification of potential suppliers, information requests to suppliers, and finally a negotiation process before awarding contracts. The study recommended that the organization adopts integrated financial management information system to avoid corruption, and therefore have a fair tendering process. Finally the study recommends that to come up with fair and competitive tendering process Identification of potential suppliers, requisition for information on suppliers and negotiation process should be thoroughly done.**

***Keywords:* Potential suppliers, suppliers information request, negotiation process, Supplier evaluation, and contract award.**

1. INTRODUCTION

Background:

Procurement is a crucial element in the working functions of any Organization. It refers to the purchasing of goods and services in the right quality, from the right source and the right price all to meet a specific need (Barney, 1991).Supplier selection is an essential process for an organization to remain longer in business and have competitive advantage. Cut throat competition in today's global markets and increased customer expectations have forced business enterprises to invest in and focus attention on, the relationships with their customers and suppliers.This study concentrated mainly on the supplier selection process. Selecting suitable suppliers for purchasing the raw materials and to delegate the non-core operations from internal production is an important part of the operation. Delegating the work from internal production to external entity specializing in the management of that operation is called outsourcing. Currently, outsourcing is the prime part of a company. Outsourcing is defined as purchasing ongoing services and parts from an outside company that a company currently provides, or most organizations normally provide for themselves (Wadhwa and Ravindran 2007). Outsourcing the activity also means that the work is distributed and hence the time-to-market the final product can be reduced.

A supply chain can be visualized as a network of firms servicing and being serviced by several other firms. However, it is conceptually easier to imagine a chain as a river, originating from a source, moving downstream and terminating at a sink. The supply chain extends upstream to the sourcing of raw materials and downstream to the afterlife activities of the product, such as disposal, recycling and remanufacturing. Regardless of magnitude, every supply chain can be visualized as consisting of sourcing stages, manufacturing stages and distribution stages. Each of these stages plays both a primary (usually physical transformation or service creation) and a dual (market mediator) role. The approach taken to execute activities in support of both roles depends on the strategy of the supply chain, which in turn, is a function of the serviced products' demand pattern (Fisher, 1997). Depending upon the structure of the chain (in terms of products and processes employed), channel power can reside with the sourcing (e.g., monopolist supplier of key commodities such as oil), manufacturing (e.g., dominant producer of a unique product such as semiconductors), or distribution (e.g., key distributor of consumer items) stages in the supply chain. Relative power in the supply chain influences strategic positioning of each link in the chain. Thus, managing supply chains is a negotiation between the objectives of constituent's benefit at each stage and the impact of each constituent's objective to the overall objective of maximizing the benefit of the entire chain.Supply chain management (SCM) is the art and science of creating and accentuating synergistic relationships among the trading members that constitute supply and distribution channels. Supply chain managers strive to deliver desired goods or services on time to the appropriate place in the ordered quantity in the most effective and efficient manner. Usually this is achieved by negotiating a balance between conflicting objectives of customer satisfaction and cost efficiencies.

Coordination of the individual links in the chain is essential to achieve this objective. The ability of trading partners to jointly communicate in real time and the transactional ease of digital dealings allow web-connected firms to virtually integrate. The Internet and information technology in general facilitate the integration of multitudes of channel enterprises. On-line collaboration enables better informed economic decision making, reduces the costs of order placement, tracking and receipt, and enhances customer satisfaction. Information technologies are a key driver of modern operational efficiency, and efficient operational execution is a driver of effective SCM. Selection of trading partners, location of facilities, manufacturing schedules, transportation routes and modes, and inventory levels and location are the fundamental operations decisions that run supply chains. These operational dimensions are the tributaries that pilot the chain downstream through its channel to end demand. Accurate and timely integrated information navigates the chain from source to sink. A supply chain is a collection of multiple suppliers', manufacturers' and distributors' processes. Each process employs a distinct focus and a related dimension of excellence. Key issues in managing an entire supply chain relate to tactical and strategic analysis of coordinated decisions in logistics, manufacturing, distribution, and after sales activities of service and disposal or recycling; analyzing product strategies; and network design decisions.The motivation for this research is derived from the debate as to the best number of suppliers to employ for satisfying a buyer's requirements. Further, the buyer considered is an intermediary in the supply chain and therefore must incorporate downstream demand into its sourcing decision. Essentially, the decisions analyzed address the question of whether a single sourcing strategy is optimal or not. To understand the relevance of strategic sourcing decisions, it must be understood how a firm's supply chain strategy is anchored to its sourcing strategy.

Statement of the Problem*:*

Supplier selection is the process by which firms identify, evaluate, and contractwith suppliers. The supplier selection process deploys a tremendous amount of a firm's financialresources. In return, firms expect significant benefits from contracting with suppliersoffering high value. This project describes the typical steps of supplier selection processes:identifying suppliers, soliciting information from suppliers, setting contract terms, negotiatingwith suppliers, and evaluating suppliers.Road Construction Agencies have increased the construction of High way roads, urban roads and rural roads since their inception in 2007.This has increased accessibility in Kenyan roads. Despite the slow and cumbersome procedures required by the Public procurement and disposal Act 2005, this study will seek to establish the determinants that explain the process of supplier selection in Kenya Rural Roads Authority.

Kenya's Road sector faces many challenges including substandard works, lack of technological knowledge, and high cost acquiring machinery and equipment. Although there is a broad body of literature that addresses issues of supplier selection, it either focuses on the type of suppliers or on the relationship between buyer and the seller. Little effort has been devoted in explaining the process of supplier selection in an organization for it to meet customer needs.The study sought to establish factors influencing supplier selection in Kenya Rural Roads Authority to gain competitive advantage.

Objectives of the Study:

General objectives:

The main objective of the proposed study was to investigate the factors influencing supplier selection in Kenya Rural Roads Authority.

Specific objectives of the study:

1. To identify potential suppliers in Kenya Rural Roads Authority, Tana River county.
2. To find out supplier information in Kenya Rural Roads Authority, Tana River County.
3. To find out negotiation process in Kenya Rural Roads Authority, Tana River County.
4. To find out evaluation and contract award procedure in Kenya Rural Roads Authority, Tana River County.

Research Questions:

Based on the objectives of the study, the researcher has developed the following research questions to assist in this study.

1. Who are potential suppliers in Kenya Rural Roads Authority, Tana River County?
2. How does Kenya Rural Roads Authority, Tana River County solicit information from its suppliers?
3. How is negotiation process conducted in Kenya Rural Roads Authority, Tana River County?
4. What are the current practices of supplier evaluation and contract award in Kenya Rural Roads Authority, Tana River County?

Justification of the study:

Infrastructure especially roads remains a catalyst in improving Kenyan economy.Over 80% of the Kenyan population live in the rural areas and therefore depend directly or indirectly agriculture production and Small enterprise businesses. Given its importance, the performance of the Road sector is therefore taken seriously by the government due to its contribution to the economy. The development of Roads plays an important role in poverty reduction since most of the vulnerable groups like pastoralists and subsistence farmers who depend on livestock and agricultural products respectivelly can access better markets to improve their livelihoods.As indicated in the analysis of economic performance, the Country has had various challenges both internally as well as externally. Internally, the challenge has been renewal of economic growth which had slowed down drastically to 1.7 % in 2008. In the 1990s, creation of conducive environment for investment, stable macro-economic policies and good governance including restoration of security all over the Country were all priorities for restoration of economic growth. In view of the above, the Government in year 2003 adopted four (4) pillars namely: -Restoration of Economic Growth within the context of a stable macro-economic framework. Rehabilitation and Expansion of the Infrastructure, Equity and Poverty Reduction and Improving Governance.

During this period (2003-2007), significance progress was made which resulted to a rapid economic growth. The intention of the Government is not only to accelerate this growth to an average of 10% per annum, but also to sustain it overtheVision2030. This Vision is based on three pillars namely Social, Economic and Political Pillars.Government will aim at maintaining 10% growth rate per annum over the plan period (2008-2012). This will be achieved through investment in tourism, agriculture, manufacturing, wholesale and retail trade, Business Process Outsourcing (BPO) and financial services.The Vision of the infrastructure sector under this period will be "to provide cost effective world-class infrastructure facilities and services in support of Vision 2030".Apart from infrastructure being identified as a necessity in improving the living conditions of both farming and pastoralists' communities, it is also necessary for improving security. Infrastructure will also contribute significantly to the reduction of cost of doing business.

The motivation for this research is derived from the debate as to the best number of suppliers to employ for satisfying a buyer's requirements. Further, the buyer considered is an intermediary in the supply chain and therefore must incorporate downstream demand into its sourcing decision. Essentially, the decisions analyzed address the question of whether a single sourcing strategy is optimal or not. To understand the relevance of strategic sourcing decisions, it must be understood how a firm's supply chain strategy is anchored to its sourcing strategy.At the moment,the Road industry is facing several challenges including emerging of briefcase contractors especially at the counties,capacity issues due lack of expertise knowledge, and ever changing weather conditions. In trying to understand the effectiveness of sourcing/supplier

selection in Kenya Rural Roads Authority,Tana River County, the findings will benefit other Road construction Agencies in the region. Students and scholars pursuing studies in this field will find the research as a useful foundation for any future studies.

2. LITERATURE REVIEW

Introduction:

Supplier selection is concerned with identifying the subset of qualified suppliers who will be considered for order placement, and allocation focuses on splitting the required quantity between the selected suppliers. Obviously these decisions are interdependent and are also driven by the total delivered costs to the firm of an order quantity from each supplier. Pan (1989) proposes a linear programming model to optimally identify the number of suppliers and their respective quantity allocations to meet pre-specified product requirements. Other constraints incorporated are related to aggregate incoming quality, lead times, and service level. The overall objective is to minimize the price per unit as a weighted average of selected suppliers' prices. It is assumed that product requirements are deterministic and supply is reliable and unlimited. In reality, however, it is common for suppliers to quote alternative pricing schemes and uncertainty exists in both supply and demand markets. Since the focus of this dissertation is on incorporating these considerations in making supplier selection and quantity allocation decisions, prior research relating to this area are reviewed next.Analytical studies on supplier selection and quantity allocation decisions show that in certain cases, multiple-sourcing, order-splitting, or diversification is preferable to single-sourcing. Horowitz (1986) provides an economic analysis of dual sourcing a single input at differing costs. It is shown that uncertainty in supply price and risk-aversion of the buyer motivate a firm to place positive orders from the high cost seller. Kelle and Silver (1990) investigate a continuous review inventory policy replenished by suppliers with stochastic delivery lead-times, and find that order-splitting among multiple sources reduces safety stock without increasing stockout probability. Ramasesh et al. (1991) also analyze a reorder point inventory model with stochastic supply lead-time, and find that in the presence of low ordering costs and highly variable lead-times, dual sourcing can be cost preferable.

Gerchak and Parlar (1990) examine second-sourcing in an EOQ context to reduce the effective yield randomness of a buying firm's purchase quantity. The benefits of diversification are traded-off against the costs of managing a larger supply base to determine whether second-sourcing is worthwhile. They also analyze the optimal number of identical sources. Rosenthal et al. (1995) introduce a mixed integer programming model for solving a supplier selection problem with bundling. The suppliers are capacitated, offer different prices, differing quality levels, and discount bundles. Agrawal and Nahmias (1997) examine a single period supplier selection and allocation problem with normally distributed supply and deterministic demand for a single product with fixed ordering costs. They are able to show that for two non-identical suppliers, the expected profit function is concave in the number of suppliers.Parlar and Wang (1993) compare the costs of single versus dual-sourcing for a firm assuming that the overall objective is to minimize purchasing and inventory related costs. In their approach, they assume that actual incoming quantities are a function of a random variable representing the yield. Separately using an EOQ and newsboy based ordering policy, they are able to show that in certain cases dual-sourcing dominates single-sourcing. Both of these studies ignore the supplier capacity issue in making supplier selection and quantity allocation decisions. Further, Parlar and Wang (1993) note that supplier yields and demand uncertainty play a critical role in the analysis.Other analytical studies similar to this research examine supplier selection and order allocation decisions with stochastic demand for the product purchased. Gallego and Moon (1993) employ Scarf's ordering rule for a distribution free optimal newsboy order quantity. They maximize profit against the worst possible distribution of demand with known mean and variance. Separate extensions incorporate a second purchasing opportunity, fixed ordering costs, random yields, and multiple items into the analysis. In particular, the case of random supplier yields assumes that each unit supplied has the same probability of being good, and the buyer pays for all units. Bassok and Akella (1991) introduce the Combined Component Ordering and Production Problem (CCOPP). The problem is one of selecting ordering and production levels of a component and a finished good for a single period with supply and demand uncertainty. In their model the distribution of supply depends on the order quantity given to a single source.

Anupindi and Akella (1993) consider a two supplier, single product procurement problem with stochastic supply and demand. They suggest that minimum order quantity policies of suppliers may affect their findings. Gurnani et al. (2000) simultaneously determine ordering and production decisions for a two component assembly system facing random finished product demand and random yield from two suppliers, each providing a distinct component. They also consider a joint supplier option and determine the value to the assembler of reliable component supply.

Sourcing is defined as purchasing ongoing services and parts from an outside company that a company currently provides, or most organizations normally provide for themselves (Wadhwa and Ravindran, 2007). Sourcing is "paying another company to provide you with a service or product that you would otherwise have your own employees conduct" (Anthony). Many large organizations are outsourcing those activities which are not either cost efficient if done in-house or are not core to their businesses (Wadhwa and Ravindran, 2007). Sourcing the activity also means that the work is distributed and hence the time-to-market the final product can be reduced.

Once the decision to source has been taken by the company, the next most important activity or challenge to the company is the selection of suppliers. The decision for selecting the right supplier is prone to errors. The right supplier will lead to the fulfilment of the company's needs and the long-term relationship (Wadhwa and Ravindran, 2007). The right supplier will also help increase the financial stability as well as the reputation of the company in the market. Selection of the right supplier is a very difficult task. It is possible that some suppliers may satisfy four criteria from a set of nine selected criteria but not satisfy the remaining five. Some suppliers may satisfy the other five criteria but not the first four.

Conceptual Framework:

The aim of the study is to find out how Kenya Rural Roads Authority's process of identifying potential suppliers, soliciting information from suppliers, setting contract terms, negotiating with suppliers, and evaluating suppliers can lead to effective process of Supplier selection. Identifying potential suppliers, soliciting information from suppliers, negotiation process and supplier evaluation and contract award are the independent variables, where any change or manipulation of the variables may result in change in the dependent variable which is the effective supplier selectionprocess of the firm. This relationship is clearly explained in the diagram below.

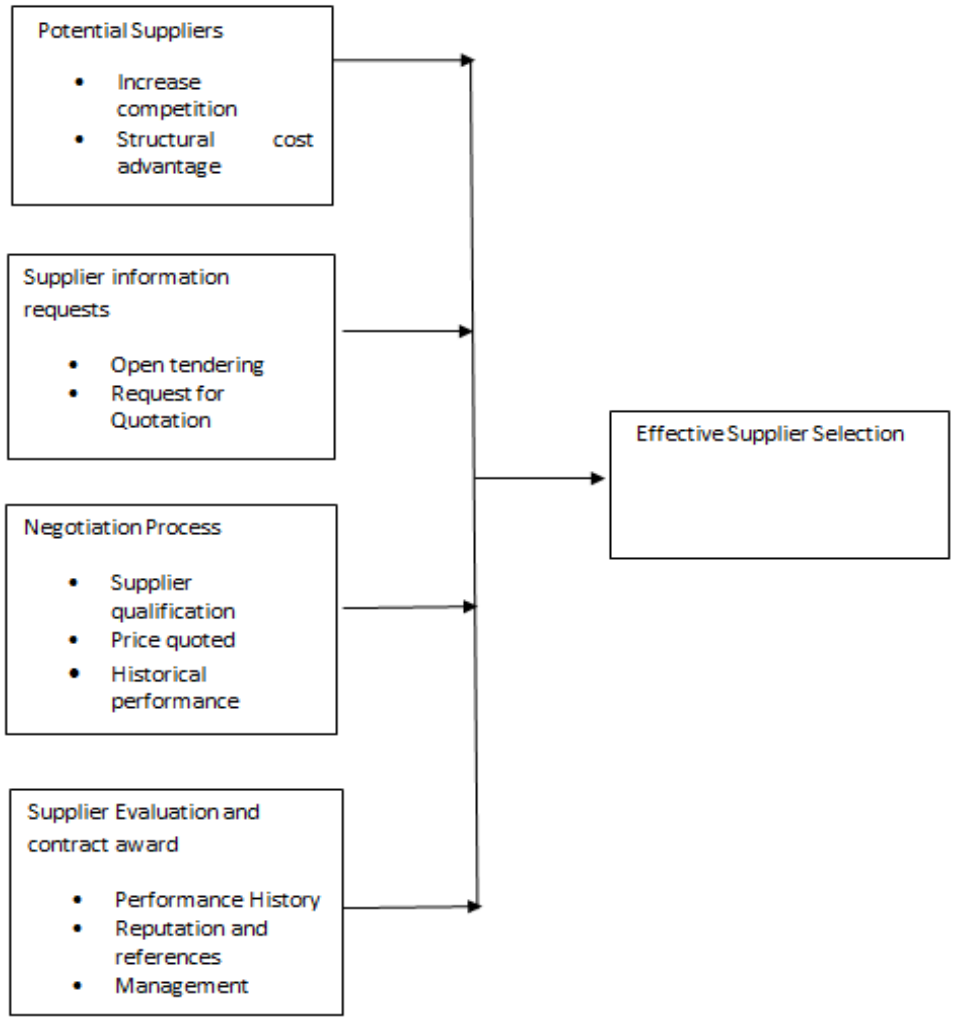

Figure 1: Conceptual Framework

Review of Variables:

Most studies divide the effectiveness of supplier selection into two categories that is: quantitative and qualitative. The quantitative determinants includes: price of the product, lead-time for delivery, transportation cost. Qualitative factors include reputation of the supplier, cultural barriers and risks.

No single methodology appears to be dominant in solving the supplier selection problem. In this study multi-objective decision making methodologies are applied to select the suppliers by optimizing various criteria (objectives) and a heuristic methodology is developed to find a suitable solution.

Identifying Potential Suppliers:

To survive in the intensely competitive global economy, it is often critically important to not only develop existing suppliers but also to discover new suppliers. Several factors make new suppliers important. First, there may exist new supplier's that are superior in some way to a firm's existing suppliers. For example, a new supplier may have developed a novel production technology or streamlined process which allows it to significantly reduce its production costs relative to predominate production technology or processes. Or, a new supplier may have a structural cost advantage over existing suppliers, for example, due to low labor costs or favorable import/export regulations in its home country. Second, existing suppliers may go out of business, or their costs may be increasing. Third, the buyer may need additional suppliers simply to drive competition, reduce supply disruption risks, or meet other business objectives such as supplier diversity. In recognition of these reasons, buyers and their internal customers may be obliged by company policy to locate a minimum number of viable, potential suppliers for every product or service procured. Finding a viable new supplier is challenging mainly due to the need to verify the supplier's ability to meet the buyer's myriad requirements. Supplier non-performance on even the most basic level, and for the simplest commodity, can have dire consequences for the buyer (Hedderich, Giesecke and Ohmsen, 2006).

Supplier qualification processes are costly and can be time-consuming. As described above, the processes can involve travel to distant supplier sites. Interviews with suppliers and suppliers' customers are time-consuming. Moreover, the entire process involves not only the buyer but also internal customers throughout the buyer organization. Suppliers who have passed the qualification requirements and are eligible for contract award are commonly referred to as "pre-qualified" suppliers. If the buyer utilizes short-term contracts and frequently re-procures the same item, it typically makes sense to establish a cohort of pre-qualified suppliers who will compete for these contracts. Even if the buyer uses long-term contracts for individual items (meaning contracts for individual items are infrequent lyre-bid), it might still make sense to use a pre-qualified supply base: If the supply base members can potentially supply many different items, they can compete to produce whichever item's long-term contract is up for re-bidding. Finally, using a supply base not only reduces qualification screening costs but also allows for the development of standardized contracts, terms and conditions for pre-qualified suppliers, thereby streamlining administrative processes involved in contracting.

Soliciting information from Suppliers:

Once the buyer has identified potential suppliers, the next step in supplier selection is to formally request that the suppliers provide information about their goods or services. While there is no agreed-upon terminology, generally the buyer makes one of three types of information requests to suppliers. Request for Information (RFI) is issued when the buyer seeks to gain market intelligence regarding what alternatives and possibilities are available to meet the buyer's needs. Typically the buyer asks suppliers what goods and services they could potentially provide, what differentiates them from other vendors in the marketplace, etc. With an RFI the buyer does not state a particular intention to award a contract. However, since responding to an RFI is time-consuming for suppliers, generally suppliers will only respond to the RFI if they expect that the buyer will eventually issue an RFP or RFQ.

Request for Proposal (RFP) is issued when the buyer has a sense of the marketplace and has a statement of work which contains a set of "performance" requirements which it needs fulfilled. For example, the RFP may describe a formed part with certain strength, flexibility, and fire resistance requirements, but not specify the particular composition of the material. Suppliers respond to the RFP with details on how they would satisfy the buyer's performance requirements and the price they would be willing to accept to do so. Upon learning the supplier's proposed pricing, the buyer may revise its requirements and/or negotiate exact terms with suppliers. Thus, the process is generally iterative. An RFP is appropriate

for procurement of items that are non-standard or highly complex, requiring supplier input and expertise about the best way to meet the requirements set forth in the RFP.

Request for Quotation (RFQ) is issued when the buyer can develop a statement of work that states the exact specifications of the good or service needed. This is the case, for example, if the buyer seeks a part made of a particular plastic and formed to a specific set of thickness, density and shape specifications. RFQs are often used in conjunction with highly structured competitive tendering processes. Typically there is no need for detailed negotiations with suppliers after bid receipt, as lowest price or some other objective criteria is used to evaluate bids. Due to their up-front specification requirements, RFQs are appropriate for procurement of items that are standard and well-known in the marketplace. For example, in the electronics industry this would include commodity components such as cables, connectors, and circuit boards. The supplier selection process culminates in a contract between the buyer and one or more suppliers. The information received from suppliers via the requests described in ultimately must be translated into formal contractual terms before contracting can occur. Contract with a supplier specifies what the supplier should do and how they will be paid by the buyer. At the highest possible level, contract terms relate to either monetary transfers (payment terms) or how the contract will be executed (non-payment terms). Contracts can specify any number of payment and non-payment arrangements. A few common ones are listed here to provide the reader with a sense of what types of contract terms the buyer might consider during negotiations and when making a contract award decision. The choice of the particular contract structure (e.g., long-term or short-term, fixed cost or cost plus, etc.).

Negotiation Process:

When making contract award decisions the buyer considers each supplier's qualifications as well as the contract terms they offer(e.g., price). A supplier's qualifications are generally considered exogenous, for example, a supplier's reputation is based on historical performance and is not alterable in the short term. Contract terms, on the other hand, can be "negotiable" between the buyer and supplier. In a negotiation the buyer attempts induce favorable terms from suppliers, and likewise the suppliers attempt to induce favorable terms from the buyer.For better or worse, negotiations often are viewed as zero-sum games where the buyer gains what the supplier gives up. An extreme example of this is the take it or leave it offer approach whereby a powerful buyer essentially dictates the terms to the suppliers. For instance, the buyer might demand a certain price and simply refuse to consider the supplier unless they agree to this price. Take-it-or-leave-it offers are rather draconian, and buyers may be reluctant to utilize them for short-term gains if suppliers perceive them as unfair.Furthermore, take-it-or-leave-it offers require the buyer to credibly commit to not renegotiate with the supplier should the supplier choose to reject the buyer's offer. If the buyer cannot make such a commitment, the threat imputed in a take-it-or-leave-it offer is meaningless.

According to Ghawai and Scheider (2004) competitive tendering is an alternative way to extract concessions from suppliers whereby suppliers are played off one another. Typically, suppliers simultaneously submit bids (in response to an RFP or RFQ). Competitive tendering approaches differ in the amount of visibility that suppliers have regarding competitors' bids. At one extreme is the dynamic open-descending-bid format. In this format, suppliers see all bids submitted and can respond by lowering their own bid, until all but one bidder has dropped out (typically bidding lasts an hour or so). At the other extreme is the sealed-bid format in which each bid is known only to the buyer and the supplier who submitted it. Kenyan government competitive tendering is typically done through sealed bidding.It is also possible that the buyer can utilize neither competition nor take-it-or-leave-it offers. Instead, the buyer and a single supplier might bargain in some general and unstructured way. Negotiation processes in practice may combine take-it-or-leave-it offering, competitive tendering, and bargaining. For instance, the buyer could employ price-based competitive tendering with a reserve price (the reserve price imposes an upper bound on the amount the buyer is willing to pay for the contract and thereby acts like a take-it-or-leave-it offer) to home in on the most promising supplier, then bargain with this supplier to finalize the contract terms.

Negotiations do not always take a zero-sum approach. The buyer and supplier can potentially both benefit if they realize their incentives are aligned rather than in conflict. Research to help buyers and suppliers realize shared interests has led to numerous advances in software-enabled "expressive bidding" in combinatorial auctions. For instance, in transportation auctions for truckload procurement, both the shipper (buyer)and the carrier (supplier) benefit if the shipper's lanes up for bid complement the carrier's existing transportation networks in a way that minimizes empty truck movements (Chen, et al., 2009).

Supplier Evaluation and Contract award:

This describes how the buyer evaluates suppliers, determines the contract winner(s), and performs follow-up monitoring to inform future supplier selections. Supplier evaluations the process by which the buyer rank orders the suppliers. The buyer then uses this rank ordering, along with other business considerations, to determine which supplier(s) will be awarded the contract. Finally, after contract award the buyer can monitor supplier performance and use this information during future supplier selection processes.

The buyer begins the supplier evaluation process by identifying the "dimensions" it wishes to use when evaluating suppliers. Price, quality and delivery were the most commonly listed supplier evaluation dimensions. Additional dimensions used include production capacity and flexibility, technical capabilities and support, information and communication systems, financial status, and innovation and R&D (Worapon and Busaba, 2009).Dimensions that appear with moderate frequency in the literature include quality systems, management and organization, personnel training and development, performance history, geological location, reputation and references, packaging and handling ability, amount of past business, warranties and claim policies, procedural compliance, attitude and strategic fit, labor relations record, and desire for business. Of course, buyers often employ new dimensions in response to prevailing business issues and challenges. Dimensions that have emerged recently include environmental and social responsibility, safety awareness, domestic political stability, cultural congruence with the buyer organization, and terrorism risk (Worapon and Busaba, 2009).

Monitoring also supports cost containment: if there is a problem with quality, it can be identified and charged back to supplier. For supplier selection itself, however, monitoring is most important in so far as it helps the buyer make more informed supplier selections in the future.In particular, during supplier evaluation the buyer may consider factors which influence the total cost of doing business with the supplier. Such costs can include, for example, the conformance and non-conformance costs which the buyer anticipates incurring during the life of the contract (e.g., costs of inspections and defect correction, respectively). (These fall under the supplier evaluation dimension of "past performance") (L.M. Ellram, 1994).The buyer may forecast these costs for each supplier. These forecasts can be constructed using historical performance data collected through supplier monitoring. For instance, the supplier's historical percentage of defective items can inform the buyer's forecast for non conformance costs during the life of a contract. (If, on the other hand, the supplier is new and thus the buyer's protocols require more careful inspection of incoming material (conformance costs), this also needs to be taken into account by the buyer at the time of supplier evaluation.) Historical information about supplier performance can also be leveraged during the negotiation process with suppliers. The buyer may choose to directly incorporate this information into a competitive bidding process via a bid markup or some other means to send a clear signal to the supplier about the importance of performance (Ellram, 1994).

Critique of Existing Literature Relevant to the Study:

The decision of selecting the right supplier is prone to errors. The right supplier is the one who will meet and complement the organization's needs from its corporate culture to long-term future needs. Some suppliers that meet some selection criteria may fail in some other criteria (Wadhwa and Ravindran 2007). For example, the supplier selected may meet the "price" criteria but the company might have to compensate on the quality of the product and lead time. Selection of suppliers depends on various different criteria. Some criteria are quantitative such as "price of the product," "lead-time for delivery," "transportation cost," etc., whereas some like "reputation of the supplier," "cultural barrier," "risk," etc., are qualitative. No single methodology appears to be dominant in solving the supplier selection problem. In this study multi-objective decision making methodologies are applied to select the suppliers by optimizing various criteria (objectives) and a heuristic methodology is developed to find a suitable solution (final suppliers)

Research Gaps:

There is evidence from the review of both the theoretical and the analytical literature that research gaps exist. Past researchers have concentrated on building a large supplier base to be seen as being transparent. So far, there has been little empirical work on supplier selection and other relationships in developing countries. This study will therefore try to fill this gap and give recommendations to institutions in Kenya.

3. RESEARCH METHODOLOGY

Research Design:

A cross-sectional descriptive research design was used in this study to investigate supplier selection process in Kenya Rural Roads Authority. The data collected was obtained using questionnaires to be circulated. Descriptive research is designed to obtain pertinent and precise information status of the phenomena. In survey research, the researcher selects a sample of respondents from a population and administers a standardized questionnaire to them.

Target Population:

The study targeted suppliers of Kenya Rural Roads Authority,Tana River County. There are over 40 firms who supply the company with various items and are contractors.The study concentrated on ditributing 30 questionnairs to contractors/suppliers who have been serving Kenya Rural Roads Authority.

Sample Size and Sampling Procedure:

The desired sample will be obtained using random sampling. Simple random sample is one in which each member of the population has an equal and independent chance of being selected.

Table 3.1 Sample Size

Category	Population	Percentage	Sample.
Contractors/Suppliers	50	60%	30

Data Collection Procedure:

The study was stratified with respondents picked randomly within identified strata of the respondents. Primary data was collected using well-structured questionnaires which the researcher personally administered. A validation of the instruments before actual survey work was done by the project supervisor. The researcher guided the respondents in filling in the questionnaire. These studies mainly used primary data collection methods. Approaches to be utilized to identify information sources and collect information for the study included questionnaires and survey.

Data Collection Instruments:

Data was collected using semi structured questionnaires. This is because expected were that some of the respondents were not literate to self-administer the questionnaires.

Data processing and Analysis:

Major issues identified from literature were listed for the respondents to select appropriately and this included: identifying potential suppliers, soliciting information from suppliers, setting contract terms, negotiatingwith suppliers, and evaluating suppliers.On receipt of the completed questionnaires, the collected data was checked for errors in responses, omissions, exaggerations and biases. All analyses was done using SPSS. For easy management and longevity of the data, it was captured in Ms-Excel 2007 windows. All data was entered and verified after effective coding. Data was then scrutinized in relation to the objective of the study, otherwise with a potential abundance data; vast numbers of irrelevance summaries was produced. Checking of Inconsistencies, anomalies, missing values, outliers (say data cleaning) was done in SPSS syntax. Analysis was descriptive in nature. Descriptive statistics included freqeuncies, percentages, mean and standard deviation. The research findings was be presented using tables and graphs while discussions and recommendations was drawn from the findings.

4. RESEARCH FINDINGS AND DISCUSSIONS

Introduction:

This chapter presents the findings of the study as well as the discussion for the study. The study targeted at collecting data from 30 suppliers. Out of these, 28 questionnaires were completely filled while there was no response in some respondents and therefore were excluded from further analysis. This represented a response rate of 93%. The results are as shown in the table below.

Table 4.1: Response rate

Response	Frequency	Percent (%)
Responded	28	93
Not responded	2	7
Total	**30**	**100**

Source Author (2017)

General information:

The study collected data on the gender and the years the respondents have known the organization.

Gender:

The study aimed at establishing the gender of the respondents. The study established that 61% of the respondents were male whereas 39% of the respondents were female.

Table 4.2: Gender of the respondent

Gender	Frequency	Percent
Male	17	61
Female	11	39
Total	**28**	**100**

Source Author (2017)

Period known:

The period the respondents have known the organization was analyzed. The study established that majority of the respondents as shown by 43% had known the organization for a period between 3 and 4 years, 39% had known the organization for a period above 4 years, 11% for a period between 1-2 years whereas 7% had only known the organization for a period of between 2 and 3 years.

Table 4.3: Period known

Years	Frequency	Percent
1-2	3	11
2-3	2	7
3-4	12	43
Above 4	11	39
Total	28	100

Source Author (2017)

Identifying potential suppliers:

Goods and services procured:

The study aimed at establishing services offered by KeRRA. It was found that majority of the respondents 61% indicated that KeRRA procures goods, 21% contracting services from other service providers, 11% hiring of services and 7% marketing and public relations services. The results are as shown in the table below.

Table 4.4: Goods and services procured

Procured	Frequency	Percent
Goods	17	61
Contracting services	6	21
Hire services	3	11
Marketing and public relations services	2	7

Procured	Frequency	Percent
Goods	17	61
Contracting services	6	21
Hire services	3	11
Marketing and public relations services	2	7
Total	**28**	**100**

Source Author (2017)

KeRRA conduction of supplier qualification process:

The study aimed at establishing how KeRRA conduct supplier qualification process. The study established from 100% of the respondents that they do it through Business questionnaire prequalification process.

Need for new suppliers by KeRRA:

The data was analyzed in terms of mean and standard deviation using SPSS. The findings were as shown in table 4.5.The mean values of the need for new suppliers by KeRRA varied from 2.89 to 3.79, standard deviations were high across all the need for new suppliers showing a high variation in opinion expressed by the respondents. In carrying out this task the study adopted a scale of 1 to 4 where 1- Totally disagree, 2- Disagree, 3- Agree, 4- Totally agree. Increase Competition (mean = 3.79, 75% agreeing) and structural cost advantage (mean=3.75, 70% agreeing) were the main reasons KeRRA needed new suppliers. The other three reasons given strong support include; low labor costs (mean=3.50, 60% agreeing), reduce supply disruption risks (mean=3.00, 40% agreeing) and streamlined process(mean=2.96, 35% agreeing) whereas supplier diversity (mean=2.89, 30% agreeing) received least support. Hedderich, Giesecke and Ohmsen (2006) converge with our study findings when they posited that several factors make new suppliers important. First, there may exist new supplier's that are superior in some way to a firm's existing suppliers. For example, a new supplier may have developed a novel production technology or streamlined process which allows it to significantly reduce its production costs relative to predominate production technology or processes. Or, a new supplier may have a structural cost advantage over existing suppliers, for example, due to low labor costs or favorable import/export regulations in its home country. Second, existing suppliers may go out of business, or their costs may be increasing. Third, the buyer may need additional suppliers simply to drive competition, reduce supply disruption risks, or meet other business objectives such as supplier diversity.

In recognition of these reasons, buyers and their internal customers may be obliged by company policy to locate a minimum number of viable, potential suppliers for every product or service procured. Finding a viable new supplier is challenging mainly due to the need to verify the supplier's ability to meet the buyer's myriad requirements. Supplier non-performance on even the most basic level, and for the simplest commodity, can have dire consequences for the buyer.

Table 4.5: Need for supplier by KeRRA

	Mean	Std. Deviation
Streamlined Process	2.96	.922
Structural Cost advantage	3.75	.441
Low labor costs	3.50	1.072
Increase Competition	3.79	.418
Reduce supply disruption risks	3.00	.861
Supplier Diversity	2.89	.786

Source Author (2017)

Challenges faced while working with Kenya Rural Roads Authority:

The study aimed at establishing the challenges faced while working with Kenya Rural Roads Authority. The study established the challenges to include: delay in payments, high competition during tendering, interference on the work before certification and political interference and security while working there.

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction:

This chapter presents the summary of the findings, conclusions of the study as well as the recommendations for the study.

Summary of the findings:

The objective of the study was to find out the factors influencing Supplier selection in KeRRA Tana River County. The study found that in identifying potential suppliers; KeRRA needs new suppliers for reasons such as streamlined process, Structural cost advantage, low labor costs, Increase competition, Reduce supply disruption risks and Supplier diversity. Information request from supplier is obtained through Request for Information (RFI), Open tendering Process, Request for Proposal (RFP) and Request for Quotation (RFQ) by KeRRA.It was also found out that in negotiation process the following factors are considered Price quotation, historical Performance, Technical capacity; Take-it-or- leave-it offer, financial position, Competitive tendering, Sealed bid and Single supplier/Bargaining.Furthermore, among the current practices of supplier evaluation and contract award in Kenya Rural Roads Authority Tana River County include Price, Quality, Delivery, Technical capacity, Information and communication systems, financial position and Production capacity and flexibility. Others include Management, Personnel Training, Performance History, Reputation and references, Supplier Location, Environmental and social responsibility, and Safety awareness.

Conclusions:

Supplier selection has increasingly become an avenue for bridging the requirements of both government and private companies. Supplier selection has become a fashionable tool for interacting with the external world and selecting the best suppliers that increases organizational performance and ensuring that operations are effectively and efficiently delivered as per customer expectations. Based on the study, Supplier selection is an essential process for an organization to remain longer in business and have competitive advantage. Many organizations need new suppliers to enhance its operations and remain competitive. Open tendering process enhances openness and transparency in contract award. Supplier qualification, Price quoted by the supplier, historical performance and technical capacity of the supplier are key factors to be considered when evaluating a winning bidder. Other crucial factors include reputation and references, management of the supplier firm, supplier location and environmental and social responsibility of the supplier firm.

Recommendations:

Recommendations on the study:

The study recommends that the organization should consider price quotations by the suppliers, diversity of the suppliers and availability of competition to be areas of focus in identifying potential suppliers. The study also recommends that Request for Information(RFI), Request for Proposal (RFP), Request For Quotation (RFQ) and Open Tendering Process to be considered as prime criteria while obtaining information from the suppliers. The study further recommends that organization has to put more emphasis on having a better negotiation process that involve Supplier qualification, Price, Historical Performance, Technical capacity, Financial position, Competitive tendering, Sealed Bid and Single supplier/Bargaining. The study finally recommends that the organization should embrace integrated financial management information system (IFMIS) and e-procurement that will reduce on corruption and ensure prompt payment to the supplier.

Suggestion for further study:

A further study should be carried out in other counties for the generalization of study findings.The study should also focus on different instrument for data collection such as interview schedules are used to see if the study findings from the county will bring out different results.Finally a study should be carried out in where the focus of the topic should be Effects of supplier selection on tendering process in Kenya Rural Roads Authority, Tana River County. To find out the relationship that comes out.

ACKNOWLEDGEMENT

I am very grateful to my supervisor Prof. Gregory Namusonge for his dedication, encouragement, guidance and moral support from the beginning to the final stage which enabled me to develop an understanding of the research study. Lastly, I humbly offer my regards to all of those who supported me in one way or another during the process up to the completion of this project including my supervisors, classmates and friends.

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