Role of Supplier Selections on Performance of Manufacturing Firms

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Abstract
Across the globe, organizations have realized the importance of procurement performance in establishing and maintaining their competitive advantage. Supplier's development was considered as one of the aspect that can enhance organization competitive advantage which would eventually result to effective organization performance. The study determined the effect of supplier selections on organizational performance in manufacturing firms in Kenya. The study adopted mixed research approach with both exploratory and descriptive survey design. The target population of this study was 151 SMEs in food and beverage industry which operated in Nairobi and practiced supplier development management practices. Stratified random sampling was employed to select a sample size of 399 respondents. The study used primary data which was collected using questionnaire. The collected data was coded through statistical analysis tool using SPSS version 21 to test for content, construct, and criterion-related validity, as well as reliability analyses. Further, a structural equation model was developed to test the relationships between the variables. In addition, regression analyses and ANOVA was performed to analyses the effects of various relationships at the sub-construct level as well at item level. The study concluded that food and beverage firms in Kenya employ several criteria in supplier development processes. These majorly included selection based on the following criteria; quality standards of products of the supplier, financial position of the supplier, flexibility of the supplier, supplier efficiency in service delivery, supplier charges, good market reputation of the supplier and increase in cost of operation. The study recommended that the food and beverage firms should train their supplier selection committees or procurement managers on how best to select the

suppliers. This enabled the firms to get the right suppliers who will lead to harnessing the benefits associated with the practice that is shortened lead times, customer satisfaction and higher profit margins

Keywords: Supplier Development, Supplier Selection. Performance, Manufacturing Firms.

Literature Review

Supplier selection is the process by which suppliers are inspected, evaluated and selected to eventually become part of the supply chain of an organization (de Boer, 2012). The selection and evaluation of suppliers is an area which has attracted the attention of most studies, and there are several approaches to support decision making on this issue (Rajesh & Ravi, 2015). One of the most important aspects for companies' success is the relationship between companies and their suppliers. Consequently, the way that a supplier is selected is crucial to the outcome of the business. Shaw, Shankar, Yadav and Thakur (2012) the supplier selection problem is a multi-criteria decision-making problem in the presence of various criteria and sub-criteria, be they quantitative or qualitative. Due to this characteristic, there arises the need to use more robust tools for decision support.

Supplier selection is generally considered as five phase process starting from the realization of the need for a new supplier, determination and formulation of decision criteria; pre-qualification; final supplier selection; to the monitoring of the supplier selection (Chai, Liu, Ngai, 2013). At first, evaluation and assessment task needs the identification of decision characteristics against which the potential suppliers are to be assessed. Next evaluation seals are selected in order to measure the appropriateness of a supplier. The next step is to assign weight to attributes to identify the significance and contribution of each criterion to the supplier evaluation and assessment. Then an attribute may comprise of several sub attributes. The last stage is to evaluate potential suppliers against the characteristics identified at the beginning (Chai, et al 2013).

Li (2006) developed three factors in supplier selection measure based on extensive literature review and practitioner interviews. He illustrated that underlying the documented suppliers' selection criteria is the need to assess a supplier's quality and service capabilities as well as his strategies and managerial alignment with the buyer. Nadeem et al. (2014) proposed an integrated model by combining the analytical hierarchy process and grey relation analysis in a single evaluation model. They proposed that through this model, it is possible to effectively integrate the specialized knowledge and experience of each disposed evaluation and the quantitative data to select the best supplier for cooperation.

Supplier selection is usually a time consuming process that evaluates suppliers on several criteria such as cost of production, raw material cost, quality assessment, organizational goal, quality staff, delivery system, personal facilities etc (Rajesh and Ravi 2015). Selection of suppliers is complicated process by the fact that numerous criteria must be considered in the decision making process. Therefore, different criteria are usually considered during the supplier selection process. Nadeem et al. (2014) surveyed a number of industries and suggested that quality and on-time delivery are the most important attributes of purchasing performance evaluation. Hsu et al (2013) Using suggested that apart from optimum cost, joint development, culture, forward engineering, trust, supply chain management, quality and communication were also important. He further suggested that the suppliers' history of supply, production price, technical capability and transportation cost also play important role during suppliers' selection. Rajesh and Ravi (2015), agreed that cost, quality and service that are the most important factors in supplier selection process. Therefore, it is important to note that cost and quality dominated more in the supplier selection process.

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 Rajesh and Ravi (2015). It has been reported that a majority of quality problems of an organization are due to defective material 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 (Golmohammadi & Mellat, 2012). 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.

Torabi, Baghersad and Mansouri (2015) assert that, in the current context of globalization, companies are increasing the focus on their core business and outsourcing their other activities. This behavior increases the importance of the process for selecting suppliers. While small firms select partners based on criteria which determine the lowest costs, large companies must select their suppliers more carefully, by considering different criteria that seek a long-term relationship with their suppliers. In a supply chain, collaboration between the company and the supplier is the most important connection of the distribution channel. The global competitive environment make the organizations highly dependent on the success of the supplier selection process. Rajesh and Ravi (2015) say that the lack of coordination or error in this process may lead to excessive delay or poor customer services. In this sense, as it has direct influence on reducing the costs, on profitability and flexibility of a business, decisions taken by the purchasing department significantly affects the efficiency and effectiveness of the business (Igarashi, de Boer & Fet, 2013).

Supplier selection problem is vital for a company operating in a competitive environment. To be competitive, the company should be in an effort to improve the total supply chain performance with the partners in the supply chain (Hashemi, Karimi & Tavana, 2015). Selection of suppliers is closely related to the purchasing department apart from other parts of the company. Supplier selection is a strategic decision. Because of the strategic importance, the risk and the uncertainty it involves, it requires the participation of decision-makers from marketing, finance and from the other departments such as production in the selection process besides the purchasing department. With this aspect it is a group decision-making process. Supplier selection is a problem which includes both quantitative and qualitative criteria (Hsu et al 2013). Some of these measures may include uncertainty and sometimes they may be conflicting. While some of the criteria can be measured numerically, some of them can be expressed verbally as they may involve uncertainty.

Igarashi, de Boer and Fet (2013) pointed that supplier selection is often a complex process as this process is under the influence of a number of unforeseen factors and uncontrollable factors which affect the decisions to be taken. Supplier selection is a Multiple Attribute Decision Making (MADM) problem that is affected by several quantitative and qualitative factors, some of which may conflict. The decision making preferences always expressed on alternatives or on the attributes of suppliers that can be used to help rank the suppliers. Generally, the input information, DMs' judgments, is often uncertain and cannot be estimated by an exact numerical value. Thus, supplier selection problem has many uncertainties and becomes more difficult. To overcome this drawback Hsu et al (2013) proposed a new grey based approach to deal with the problem of selecting suppliers under an uncertain environment.

In this area, Rajesh and Ravi (2015) pointed several methods that had been proposed to solve the supplier selection problem, the main ones being the analytic hierarchy process (AHP) (Barbarosoglu & Yazgac, 1997), the analytic network process (ANP) (Thompson, 1990), the linear weighting methods (LW) (Thompson, 1990), total cost approach (TCA) (Monezka & Trecha, 1998) and mathematical

programming (MP) techniques (Chaudhry, Forst & Zydiak, 1993). However, Rajesh and Ravi (2015) highlighted the drawbacks of these methods in each method, he pointed that although linear weighting is a very simple method, it depends on human judgment heavily. Moreover the factors are weighted equally, which rarely happens in practice. MP requires arbitrary aspiration levels and cannot accommodate qualitative attributes (Genovese, Lenny Koh, Bruno & Esposito, 2013). On the other side, AHP cannot effectively consider risk and uncertainty in estimating the alternative's performance because it assumes that the relative importance of factors affecting supplier performance is known with certainty (Igarashi et al 2013).

Theories
Grey Theory
Grey system was originally developed by Deng (1989) on the basis of grey sets, is an important methodology for solving problems which involve uncertainties and aims at handling systems with unknown or incomplete information. A grey system is a system which contains both known and uncertain unknowns (Zheng & Lewis, 1993). According to the theory, the information is classified into three categories. This classification depends on the degree of information obtained. It is said to be white when it is completely certain; black when it is totally unknown and grey when it is insufficient (Yang & John, 2014).

Grey based approach is an effective mathematical means to deal with systems analysis characterized by incomplete and uncertain information (Li., Yamaguchi & Nagai, 2007). According to Li., Yamaguchi and Nagai (2007) in recent years, a fuzzy-based approach has been proposed to deal with the supplier selection problem under uncertainty, but the advantage of grey theory over fuzzy theory is that grey theory also considers the condition of the fuzziness; in other words, grey theory can deal flexibly with the fuzziness situation (Zadeh, 1965).

According to Li., Yamaguchi and Nagai (2007) in grey method, the buyer calculate a grey possibility degree between compared suppliers alternatives set and ideal referential supplier alternative to determine the ranking order of all alternatives of supplier and to select the ideal supplier based on grey numbers. The drawback of the method is that the negative ideal referential alternative is not considered to evaluate and rank the alternatives. Sometimes, the selected solution (candidate supplier) which has the minimum grey possibility degree from the ideal solution may also has a lower grey possibility degree from the negative ideal solution as compared to other alternatives (Zhang, Wu & Olson, 2005).

In manufacturing industries the raw materials and component parts can equal up to 70% of the product cost. In such circumstances the purchasing department can play a key role in cost reduction, and supplier selection is one of the most important functions of purchasing management (Ghodsypour & O'Brien, 1998). When a relatively few parts are procured externally, the total demand can be provided by only one supplier. Such a sole sourcing scenario appears to be tenable especially in the last decade, which has seen an important shift in the sourcing strategy of many firms, moving from the traditional concept of having many suppliers to rely largely on one supplier with which a long term win–win partnership is established. In this situation, the decision consists of selecting one supplier for one order in order to meet the total buyer's demand.

Supplier selection is a multiple-attribute decision making problem, since it involves various criteria to be considered. Besides it includes both quantitative and qualitative criteria which some of them may include uncertainty and sometimes they may be conflicting (Bali, Kose & Gumus, 2013). In resolving such decision making problems, there are many relevant methods. The grey theory is a new and

different approach which handles the uncertainty of a system. And supplier selection problem which sometimes involves uncertainty can be seen as a grey system. The importance of the attributes and the ratings of attributes can be expressed in grey numbers which gives the flexibility to express decisions more easily (Waraporn 2012). Grey theory model is suitable to the decision-making under more uncertain environments. Grey theory provide a viewpoint on the attribute values in rough set decision table under the condition that all alternatives are described by linguistic variables that can be expressed in grey number. The most suitable supplier can be determined by grey relational analysis based on grey number and therefore suitable in supplier selection under supplier development initiatives.

Transactional cost economics theory
The theory of Transaction Cost Economics (TCE) was advocated by Williamson in 1979. Transaction Cost Economics (TCE) is an economic theory that provides an analytical framework for investigating the governance structure of contractual relations within a supply chain. Transaction Cost Economics (TCE) theory inspects how business partners who collaborate with each other shields one another from harmful subsidiary with differing relationships (Klein, 2000). It has been the most important new institutional theory which puts the accentuation on the decision on the sourcing predicament, if to outsource or not. The sourcing situation of a firm is likewise described as the make-or-buy decision of a firm (Christopher & Shook, 2009). The two primary drivers of Transaction Cost Economics are uncertainty caused by the external environment and costs, which consist of Coordination costs and Transaction costs, uncertainty and costs, are influenced by the human agent, an individual distinguished through bounded rationality and opportunism, in order to dissect transaction costs (Fink, 2006).

Transaction cost theory tries to reveal why many firms are in existence, and why firms expand or source out deeds to the firms in external environs. The transaction cost theory assumes that majority of firms attempt to reduce the costs of exchanging resources within the environment and that these firms try to curb the bureaucratic costs of exchanges within the company. The majority of these firms are as a result weighing the costs of switching resources with the environs, against the bureaucratic costs of performing activities in-house. Lysons and Farrington (2006) further clarify that, the theory refers to the idea of the cost of providing for goods or services if it was purchased in the marketplace rather than from within the firm and elaborate the three concepts that underpin the theory i.e. transaction costs, asset specificity and asymmetrical information distribution. Transaction costs are comprised of search and bargain costs; bargaining and decision costs; and policing and enforcement costs. Asset specificity refers to the relative lack of transferability of assets, e.g. sites, physical assets, human assets, brand names, dedicated assets, etc., intended for use in a given transaction to other uses.

A publication by Williamson (2008) points the need for further elaboration of the link between TCE and supply management, where TCE examines individual transactions, while supply management introduces a broader systems perspective in which groups of related transactions are managed as chains. Transaction Cost theory might be one of the most important organization theories because of the studies that have been encouraged trough it (Williamson 2010), and is one of the main perspectives in organizational studies (David & Han 2004). The vital commitment of Transaction cost economics to organization theory, resulted in a wide range of empirical contributions, using transaction cost economics, for instance as a make or buy decision help, or verification of the right contract mode (Macher & Richman 2008).

In procurement activities, the main activities of Transaction cost economics are centered within 5 processes, namely category strategy, supplier strategy, quotation supplier selection and negotiation, operative procurement and supplier evaluation. Within the first process, the category strategy, the buyer puts equal products into one pool and can then determine a strategy for this pooled group (Schiele, 2011). A strategy could vary from single vs. multiple sourcing, or international vs. national sourcing. According to Van Weele (2005) for a supplier strategy, one might identify the purchasing volume, and level of dependency on the supplier to create a supplier strategy. For supplier selection and negotiation, one can choose between competitive bidding and negotiation (Monzka *et. al* 2010). Coming to the operative procurement step, this step assists the supplier to act according to what has been negotiated beforehand. When the supplier is providing the buyer with the component, one can measure performance of the supplier, which can be indicated through quality, costs and service. Comparing the actual performance to the required performance agreed on in the contract might also be of help. Looking at the Primary decisions of the purchasing network, it is focused on the make or buys decision, sourcing strategies, creating a supplier portfolio and supplier negotiation and contract awarding. All of those decisions can indirectly or directly be influenced by Transaction cost economics. As one analyses the decision points and possible contributions of TCE, this study arrives at the point that the make or buy decision, or in this case make, hybrid, or buy is even examined through a guideline given by Williamson (2010) and therefore directly supports strategic decision making in the make or buy decision. Williamson (2010) argued that the company should make a component if transaction costs cannot be kept low, use a hybrid governance approach if asset specificity is high but transaction costs can be kept low through the safeguards provided in the contract, and use the market if the component which has to be supplied has low asset specificity. Coming to the sourcing strategy, whether to use multiple suppliers or a single supplier, one might use the same approach of the human agent as being opportunistic and limitedly rational, as in the make or buy decision. Single sourcing is used when the supplier offers special technology, which can lead to a competitive advantage of the company; however the relationship has to be safeguarded to ensure a cooperative relationship.

Multiple sourcing can be applied when the component is placed within an unassisted, highly competitive market, mostly not providing any special technology that leads to a competitive advantage. When creating a supplier portfolio the company pools suppliers with the same activities into one pool, however since there is a difference between special technology suppliers, and suppliers providing low asset specificity, one might differentiate between parts that provide a competitive advantage and parts that do not and therefore pool only suppliers with high asset specificity for components delivering a competitive advantage and pool only suppliers with low asset specificity for suppliers providing components that do not lead to a competitive advantage. Coming to supplier negotiation and contracting, the underlying assumption that the supplier tries to get the best deal because of opportunistic behavior, and differentiation between non-specific technology assets and assets with special purpose technology can contribute to the inclusion of safeguarding mechanisms within contracts.

Organizations may need to choose whether to purchase a segment from a solitary supplier or from various suppliers. Transaction Cost Economics serves as assistance for that choice. Cousins and Lamming (2008) argued new product development needs early supplier involvement and fluent exchange of information and thereby support single sourcing for those circumstances which already indicating advantages of single sourcing. Some people might see an advantage in single sourcing, which could take place in the decision to outsource a component.

The vital commitment of Transaction cost economics to organization theory, resulted in a wide range of empirical contributions. Transaction Cost Economics (TCE) inspects how business partners who collaborate with each other shield one another from harmful subsidiary with differing relationships. It has been the most important new institutional theory which puts the accentuation on the decision on the sourcing predicament, if to outsource or not. The sourcing situation of a firm is likewise described as the make-or-buy decision of a firm (Christopher, 2009). The two primary drivers of Transaction Cost Economics are uncertainty caused by the external environment and costs, which consist of Coordination costs and Transaction costs (Fink 2006).

Methodology
Research Design
The study adopted mixed research approach which was both exploratory and descriptive survey design. A descriptive research design determined and reports the way things are (Mugenda & Mugenda, 2003). Creswell (1998) observed that a descriptive research design is used when data was collected to describe persons, organizations, settings or phenomena. The design also had enough provision for protection from bias and maximized reliability (Kothari, 2011). Descriptive design used a pre-planned design for analysis (Mugenda & Mugenda, 2003). In this study, inferential statistics and measures of central tendency, dispersion and distribution were applied. Exploratory research design was a flexible design that allowed the researcher to consider many different aspects of a problem, while descriptive survey was a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003).

Population of Study.
Data available from KAM (2016) there were 1200 SMEs in food and beverage industry ranging from small to large SMEs. Out of 1200 SMEs only 187 of them practiced procurement functions with 151 (80%) based in Nairobi; the rest were located in other major towns and regions, including Coast and Nyanza/Western provinces, and Nakuru, Eldoret, Athi River, Nyeri and Thika. The study only targeted key persons in the procurement department especially those who handled raw materials, those in production at multiple stages/organizations and those at distribution channels and key persons with performance information. This reduced complexity, time and costs in terms of research. Past study (Thatte, 2013) had used similar unit of observation. The study was extrapolated the result obtained at firm level to supply chain level. Table 3.1 shows target population. This was in line with the internal organization of each firm since according the structure of each firm.

Table 1.1 Target Population

	Population	Percentage
Supply Chain Management	87	18
Operations	120	24
Logistics/Warehouse	108	22
ICT	80	16
Finance	100	20
Total	**495**	**100**

Sampling Frame
The sampling frame described the list of all population units from which the sample was selected (Fei Shir, 2015). The study employed Stratified random sampling technique in coming up with a sample size of 399 respondents from a total of 495 in specific department within firms in food and beverage industry. In arriving at adequate sample size, Yamane (1967) formula was used as follows to arrive on the number of respondents to be sampled:

$$n = \frac{N}{1+N(e)^2}$$

Where;

N= Population;
e = margin of error or significance level at 0.05,
n = sample size
Therefore,
= 495/[1+495(0.05^2)]
= 399 Respondents

Sample and Sampling Technique
The study employed Stratified random sampling technique in coming up with a sample size of 399 respondents from a total of 495 in specific department within firms in food and beverage industry. Stratified random sampling is unbiased sampling method of grouping heterogeneous population into homogenous subsets then making a selection within the individual subset to ensure representativeness. The goal of stratified random sampling was to achieve the desired representation from various sub-groups in the population. In stratified random sampling subjects were selected in such a way that the existing sub-groups in the population are more or less represented in the sample (Fei Shi, 2015).

Data Processing and Analysis
The researcher perused completed questionnaires and document analyzed recorded sheets. Quantitative data which was collected was analyzed using descriptive statistics running it in a software SPSS version 21 and presented through frequencies, percentages, means and standard deviations. This was done by tallying up responses, computing percentages of variations in response as well as describing and interpreting the data in line with the study objectives and assumptions through use of SPSS version 21 to depict variable characteristics (Cheng, 2014). Content analysis was used to test data which was qualitative in nature or aspect of the data to be collected from the open ended questions. The information was displayed.

Data Analysis
The study analyzed the background information of the respondents in the procurement department. The findings were represented in Table 1.2

Table 1.2: Background Information of the Respondents

Demographics	Gender	
	Frequency	Percent
Female	165	42.4
Male	225	57.6
Total	**390**	**100**
Age		
	Frequency	Percent
Below 20	31	7.9
20-29	46	11.8
30-39	107	27.6
40-49	152	38.9
50 and above	54	13.8
Total	**390**	**100**
Education		
	Frequency	Percent
No education	115	29.6
Primary education	54	13.8
Secondary education	61	15.8
Collage Education	110	28.1
University education	50	12.8
Total	**390**	**100**
	Experience	
Below 2 Years	42	10.77
Between 3-5 Years	204	52.31
Between 6-10 Years	121	31.03
Over11 years	23	5.90
Total	**390**	**100**

The findings on the gender of the respondents indicated that the majority of staff in manufacturing firms who participated 225 (57.6%) were male while 165 (42.4%) of the staffs who participated in the study were female. This revealed that, the staffs employed in the study were male depicting a more representation of the male in the supply chain management of the food and beverage industry in Kenya

The findings on the age of the respondent indicated that the majority of the staffs 204 (52.31%) were of between3- 5 years experiences, 121 (31.03%) were between6-10 years experiences 42 (10.77%) were below 2 years experiences and 23 (5.90%) were over 11 years experiences. This implies that the researcher considered of respondents with different level of experience.

The findings on the education level of the respondents indicated that 115 (29.6%) were not educated, 110 (28.1%) were college graduates, 61 (15.8%) had secondary level education, 54 (13.8%) had primary level education and 50 (12.8%) were university graduates. This implies that the researcher considered the opinion of all respondents irrespective of their level of education. Therefore the biasness caused by education level where eliminated in the study.

The main objective of the study was to determine the effect of supplier selection management practices on organizational performance in manufacturing firms in Kenya.

The study conducted Rotated Factor Matrix for Supplier Selection Measures in order to determine the significant factors to be considered in data in the study. The finding were presented on Table 1.3.

Table 1.3: Rotated Factor Matrix for Supplier Selection Measures

Rotated factor matrix

	Factor loading	Comment
Suppliers selected are the once who meets the least cost criteria of the firm.	0.820	Retained
Supplier selected are the only one who possess positive market reputation	0.796	Retained
Selected suppliers' are only the ones who can meet quality standards of the firm	0.763	Retained
The determination of the supplier has always been guided by least cost consideration	0.677	Retained
Assessment process has always identified suppliers meeting firms quality standard	0.605	Retained
The criteria for firm selection ensures that only suppliers with high performance reputation are contracted	0.508	Retained
Supplier selection should be guided by the least cost suppliers	0.494	Expunged
Firms selection criteria ensures only suppliers meeting firms standards are selected	0.381	Expunged
The selection process has often identified suppliers with the history of high performance	0.21	Expunged

Extraction Method: Maximum Likelihood.

a. 3 factors extracted. 6 iterations required.

The factor loadings from the factor analysis revealed that the items to retain were, Suppliers selected are the once who meets the least cost criteria of the firm (0.820), supplier selected are the only one who possess positive market reputation (0.796), selected suppliers' are only the ones who can meet quality standards of the firm (0.763), the determination of the supplier has always been guided by least cost consideration (0.677), assessment process has always identified suppliers meeting firms quality standard(0.605) and the criteria for firm selection ensures that only suppliers with high performance reputation are contracted. The other items in the questionnaire were all expunged because they did not meet the loading criteria of 0.5.

The study conducted reliability Statistics for Supplier Selection Measure .The findings were as presented in Table 1.4.

Table 1.4: Reliability Statistics for Supplier Selection Measure

Reliability Statistics			
Before factor analysis		**After factor analysis.**	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
0.816	9	0.838	6

Before factor analysis the Cronbach's Alpha value of reliability was 0.816 and after factor analysis the value improved to 0.838 which was an acceptable reliability value because it was above the 0.7 value criteria recommended for data to be considered reliable.

The study conducted Supplier Selection Descriptive Statistics Data. The findings were as presented in Table 1.5

Table 1.5: Supplier Selection Descriptive Statistics Data

Descriptive Statistics							
	N	M	SD	Skewness		Kurtosis	
	Stc	Stc	Stc	Stc	S.E	Stc	S.E
Selected suppliers' are only the ones who can meet quality standards of the firm	390	4.01 80.20%	1.01	-1.309	.124	1.435	.247
Assessment process has always identified suppliers meeting firms quality standard	390	3.32 66.40%	1.20	-.764	.124	-.595	.247
Supplier selected are the only one who possess positive market reputation	390	3.88 77.60%	1.04	-1.227	.124	1.133	.247
The criteria for firm selection ensures that only suppliers with high performance reputation are contracted	390	3.28 65.60%	1.21	-.668	.124	-.716	.247
Suppliers selected are the once who meets the least cost criteria of the firm	390	3.91 78.20%	1.05	-1.248	.124	1.147	.247
The determination of the supplier has always been guided by least cost consideration	390	3.36 67.20%	1.18	-.780	.124	-.477	.247
Valid N (listwise)	390						

KEY: N-Sample size, M-Mean, stc-Statistics, SD- Standard Deviation, SE-Standard Error.

Only descriptive statistics for items retained was computed. Responses from the questionnaire were computed descriptively and presented in terms of the mean, the standard deviation, skewness and kurtosis. Skewness and kurtosis were computed to check the distribution (normal) of the data

The skewness statistic confirmed that data was normally distributed because the standard error (0.17) was not more than double the skewness statistics for the five items under study. The kurtosis

statistic also confirmed that the data was normally distributed because for all items, the data ranged between-3 and 3 which is the acceptable range for a normally distributed set of data.

The findings indicated that 80.20% (mean = 4.01) of the respondents were of the opinion that the Selected suppliers' are only the ones who can meet quality standards of the firm   while 78.20% (mean =3.91) of the respondent were of the view that Suppliers selected are the once who meets the least cost criteria of the firm 77.60%(mean=3.88) held that supplier selected are the only one who possess positive market reputation, 67.20%(mean=3.36)   held that the determination of the supplier has always been guided by least cost consideration , 66.40% (mean=3.32) held that assessment process has always identified suppliers meeting firms quality standard and 65.60% (mean=3.28) held that the criteria for firm selection ensures that only suppliers with high performance reputation are contracted. The main findings therefore indicated that the best supplier selection measures according to the respondents were production of quality standard products by suppliers, increase in cost and suppliers good market reputation as they are closely related.

The study findings indicate that quality standard is a good indicator of supplier selection. Quality standards are important in selecting the supplier because quality supplier is an indication of the quality of goods that they supplier. It also ensures the company can obtain the most efficient products possible. Much of this demand is driven by government regulations and Energy Star requirements. Quality standards of the suppliers provide goods that are free from any manufacturing defect deficiency or significant variation. Quality standards of suppliers may be important because   there may be certain standards that are set that specify the quality of goods and also so that uniformity is achieved in the entire set of products being supplied. The supplier should be in a position to supplier goods which match with the features and specifications and should be capable to meet the implied need of the product. It may be also due to the facts that the firm need certain standard of goods with the details that they specify so that the supplied product can meet the quality and the purpose of the product in the firm. The manufacturing firm may be trucking the supplier information when selecting the so that they can identify the best supplier.

According to Braglia, &Petroni, (2014) tracking supplier information, parts, materials, and services can be the most difficult and most important facet of supply chain management because it determines the quality of goods that are supplied to the firm.   Firms use quality standard   to give details of the requirements, specifications, the various guidelines and characteristics to be able to meet its quality by the product in order to meet the purpose of the product, process or the service (Folaron, 2013). According to Marie Butler-Knight Safty, (2015) manufacturing firms should minimum standards which explain accepted set of quality standards for the goods and services that they need. Quality of supplier is not all about how the firm can incur profit or loss but it is the safety and usability of the product to the company. According to Gosnik, & Vujica-Herzog, (2014) some supplier who cannot meet the set standards of the firm are prone to supplying good which may end up not being able to meet the production needs of the company or may bring more drawbacks and wastage. The quality of raw materials supplied to the company determine the quality of products. If supplies can meet the quality standards the manufacturing firm will reap better profits and reduce losses of high quality products. This is because those that exceed quality standards stand out above their competitors and further their potential for profit and consumer loyalty. According to Harry, & Schroeder, (2014) companies have the set standards for the quality of suppliers which vary from one firm to another. Quality can be an obscure concept at first because what one might see as quality someone else may not. The suppliers quality standard of suppliers make it easier for companies to

meet quality needs of their raw materials (Besta, Mikoláš, Zapletal, Haverland, & Hendrych, 2013). Supplier's quality standards serves as a framework.

The study conducted Simple Regression Model Significance presented on Table 1.6

Table 1.6 Simple Regression Model Significance (ANOVA)

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	2.722	1	2.722	2.662	.000[a]
	Residual	396.861	388	1.023		
	Total	399.584	389			
a. Predictors: (Constant), supplier selection.						
b. Dependent Variable: organizational Performance						

The study findings indicated that the model overall, results in a significantly good degree of prediction of the outcome variable. Supplier selection (p=0.000) is significant in determining the performance because its p-value is less than 0.05. This implies that the model was good fit for the data. The study findings were presented in Summary of simple Regression Model Coefficients table 4.7 below

Table 1.7: Summary of simple Regression Model Coefficients

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	2.16	.246		8.785	.000
	Supplier selection	.113	.069	.083	1.631	.000
a. Dependent Variable: Organizational Performance						

The study findings indicated that supplier selection affects organizational performance $p < 0.05$. Therefore the regression model shows variable relationship was;

$Y = \beta_0 + \beta_{1x1} + \varepsilon$

Where; y = Organizational performance

x_1 = Supplier selection.

$Y = 2.16 + 0.113_{x1} + \varepsilon$

Conclusion

The study concludes that manufacturing firms when considering supplier selection should emphasize on production of quality standard products of suppliers, decrease in cost and suppliers good market

reputation as they enable manufacturing firms acquire quality inputs for quality output and market competitive edge.

Recommendation
The study recommends that manufacturing age firms should train their supplier selection committees or procurement managers on how best to select the suppliers. This will enable the firms to get the right suppliers which will lead to harnessing the benefits associated with the practice that is shortened lead times, customer satisfaction and higher profit margins.

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