

International Journal of Social Sciences and Information Technology

<http://www.ijssit.com>

Vol 1 Issue IV, October 2015
ISSN 2412-0294

INFLUENCE OF SUPPLIER QUALITY MANAGEMENT PRACTICES ON PROCUREMENT PERFORMANCE OF NATIONAL HOSPITAL INSURANCE FUND, KISII COUNTY, KENYA

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Abstract

Supplier quality management is a concept that enable organizations today to achieve better procurement performance. It's a set of activities initiated by management put checks and balances on suppliers concerning quality of goods and services and this helps to improve organizational procurement performance. These activities include and not limited to competitive supplier selection, supplier development, supplier integration, quality measurement and conducting supplier audits. Many firms want to increase their procurement performance but the means to achieve that are always a challenge. National Hospital Insurance Fund holds inventories of items that require frequent replenishment; therefore frequent contact between suppliers quality management practice is of necessity. The purpose of this study was to assess the influence of supplier quality management practices on procurement performance of National Hospital insurance Fund, Kisii county in Kenya. The study sought to establish the extent to which supplier performance evaluation as a practice influence procurement performance, to determine the extent to which to establish the extent to which supplier selection practice do influence procurement performance in NHIF, Kisii. The study adopted a case study design with a study population of 50 respondents drawn from the top management and procurement department. Primary data was collected using questionnaires while secondary data was collected from published reports. The study results revealed that the between correlation between evaluating the supplier performance and lead time, cost savings and inventory flow was positive and significant; for supplier appraisal and procurement performance a positive and significant relationship exist ($R = 0.760$, $P < 0.005$). The study recommends that organizations to maximize the use of supplier quality management to improve procurement performance.

Key words: *Supplier quality, supplier selection, procurement performance*

1. Background to the Study.

The concepts of supplier quality management (SQM) can be viewed as an integration of strategic practices which need to stretch across inter-organizational boundaries to satisfy both existing and new customers (Harland *et al.* 1999). Accordingly, Yeung and Lo (2002), SQM can be viewed in terms of the managerial efforts necessary for creating an operating environment in which a manufacturer can integrate its supplier capabilities into its operational processes. These managerial efforts can be clustered into several components namely management responsibility, supplier selection, supplier development, supplier integration, quality measurement and conducting supplier audits. Fernandez,(1995) posits that supplier selection, supplier development and supplier integration can be regarded as forming an SQM system, with management responsibility seen as the driver of the system.

In order to compete effectively in the world market, a company must have a network of competent suppliers. Supplier assessment and selection is designed to create and maintain such a network and to improve various supplier capabilities that are necessary for the buying organization to meet its increasing competitive challenges. A firm's ability to produce a quality product at a reasonable cost and in a timely manner is heavily influenced by its suppliers' capabilities. Supplier performance is considered one of the determining factors for the company's success (Krause et al, 2000) Lyman and Wisner (2002), argued that without a competent supplier network, a firm's ability to compete effectively in the market can be hampered significantly.

Many studies have been conducted in the area of supplier monitoring and evaluation. Thairu *et al.*, (2012) and Okello *et al.*, (2014) looked into what the traders in Dagoreti market, in Kiambu, Kenya thought about the concept of supplier appraisal and whether they practiced it and the influence of supply chain management practices. The studies revealed that the supplier evaluation criteria include: location of supplier, adequate facilities, use of information technology, financial strength, quality in operations and products, adequate production capacity, and skilled personnel, corporate social responsibility and good ethics.

A survey conducted carried out by Humphrey *et al.* (2003) on 142 electronic manufacturing companies in Hong Kong indicated a correlation analysis that transaction-specific supplier development and its infrastructure factors significantly correlated with the perceived buyer-

supplier performance outcomes. Hierarchical multiple regression analyses suggested that transaction-specific supplier development, trust, supplier strategic objectives and effective communications significantly contributed to the prediction of buyer–supplier performance improvement. In summary, whereas Thairu *et al.*, (2012) and Okello *et al.*, (2014) looked into what the traders in Dagoreti market, in Kiambu Kenya thought about the concept of supplier appraisal and whether they practiced it and the influence of supply chain management practices on the Nairobi Securities Exchange, Wagner (2006) only examined the relationship between supplier development and the support of the customer firm's competitive strategy. Humphrey *et al.* (2003) looked at how transaction-specific supplier development and its infrastructure factors significantly correlate with the perceived buyer-supplier performance outcomes. It is noted that the areas addressed though varied did not comprehensively cover the subject of supplier quality management practices. They were deficient in highlighting supplier quality management practices and how they relate with procurement performance. These studies failed to shed light on the extent of supplier integration. For this reason, these areas are still unclear in linking supplier quality management practice to procurement performance.

2. Statement of the Problem

Suppliers are under considerable pressure to deliver performance improvements in terms of provision of quality goods and services in view of the customer and to achieve financial savings through more efficient and coordinated service delivery. Many firms would want to increase their performance levels but the means to do it is always a challenge. Supplier quality management practice is among the avenues that assist a firm to improve its operational and financial performance. National Hospital Insurance Fund holds inventories of items that require frequent replenishment and a frequent contact between them and their suppliers. Past studies have inadequately investigated supplier quality management practices especially in NHIF in the Kenyan context.

3. Objectives of the Study

The main objective of the study is to assess the influence of supplier quality management practices on procurement performance of National Hospital Insurance Fund, Kisii county, Kenya.

The specific objectives of the study were to:

- i) Establish the extent to which supplier performance evaluation influence procurement performance in NHIF, Kisii
- ii) Determine the extent to which supplier appraisal influence procurement performance in National Hospital Insurance Fund, Kisii
- iii) Establish the extent to which supplier selection influence procurement performance in NHIF, Kisii

4. Justification of the Study

The findings of this study are of great importance to the management of National Hospital Insurance Fund and other governmental and nongovernmental organizations that engage suppliers in the provision of goods and services. The study findings provide valuable insight into how to choose suppliers in order to achieve better procurement performance.

5. Empirical Literature

Agency Theory and Supplier Quality Management: this theory is concerned with agency relationships. Two parties have an agency relationship when they cooperate and engage in an association wherein one party (the principal) delegates decisions and/or work to another (an agent) to act on its behalf (Eisenhardt, 1989; Rungtusanatham *et al.*, 2007). The important assumptions underlying agency theory are that: potential goal conflicts exist between principals and agents; each party acts in its own self-interest; information asymmetry frequently exists between principals and agents; agents are more risk averse than the principal; and efficiency is the effectiveness criterion (Eisenhardt, 1989; Ekanayake, 2004; Rungtusanatham *et al.*, 2007).

In a supply chain relationship the buying firm acts like a principal that delegates the authority of production and/or services to the supplier, the supplier being the agent, so both parties are engaged in an agency relationship (Starbird, 2001; Zsidisin and Ellram, 2003). Along with the delegation of production and services, the responsibility of maintaining satisfactory quality of the supplied products and services is also delegated to suppliers, so buying firms need to ensure that suppliers provide products and/or services that conform to the quality requirements stipulated in the supply contracts. Moreover, competition these days is becoming supply chain versus supply chain rather than firm versus firm (Ketchen and Hult, 2007), so firms are working to increase customer satisfaction and gain competitive advantage by finding ways to improve the whole

supply chain, from suppliers to end consumers. Strategic quality management of supply chains not only ensures the quality of supplies, but also enhances the capabilities of suppliers' quality management. Managing supplier quality involves frequent, continuous interactions between buying firms and their suppliers in tackling such various issues as negotiating contractual provisions related to quality requirements and rewards, penalties and inspection policies, specifying requirements on the supplier's quality qualification and certification, and collaborating on product design and process improvement (Flynnand, 2005; Kaynak and Hartley, 2008; Kuei *et al.*, 2008).

A well-developed agency theory is thus particularly useful in understanding the use of management mechanisms for Supply chain quality management (SCQM) and the attributes of supply chain relationships. The assumptions and prescriptions of agency theory fit naturally with the issues inherent in SCQM. In the process of managing supplier quality, buyers in agency relations are faced with potential problems. By their nature, buyers expect suppliers to provide good quality and to improve the quality of supplied products and/or services, but suppliers may be reluctant to invest substantially in quality, especially if they perceive that buyers are reaping all the benefits. The difference in interest between buyers and suppliers will result in the two parties concerning themselves only with their self-interests. At this point moral hazard and adverse selection problems are likely to arise (Zsidin, 2006; Robinson and Malhotra, 2005; Starbird, 2001). When buying firms cannot constantly monitor the process at suppliers' sites, which is usually difficult or expensive to do so, suppliers may conceal their difficulties in delivering the quality demanded by buyers i.e. adverse selection, and slight efforts to control and improve the product and process quality as expected. Furthermore, buyers and suppliers may have different attitudes toward risks associated with quality failures, especially those that occur after sales to end consumers, a situation that will result in risk-sharing issues between buyers and suppliers. Thus, when making decisions about how to manage supplier quality performance, buyers need to assess the nature of their buyer-supplier relationships in order to select the appropriate management mechanism.

Supplier quality management is a set of activities in most cases initiated by the management to improve organizational performance. Such activities include measuring and tracking the cost of supplier quality, using performance based score cards to measure supplier performance,

conducting supplier audits and establishing effective communication channels with suppliers among many more, with an aim of achieving customer satisfaction (Carr and Pearson, 1999). Forker (1999) argues that the impact of supplier quality on an organization's performance is large and direct, and the general understanding is that a firm's quality performance can only be as good as the quality performance of its suppliers. An increasing tendency towards supplier development by organizations as supplier quality integration is found to be a critical dimension of quality excellence.

The concepts of supplier quality management (SQM) are viewed as an integration of strategic practices to stretch across inter-organizational boundaries to satisfy both existing and new customers (Harland et al. 1999). Accordingly, Yeung and Lo (2002), SQM can be viewed in terms of the managerial efforts necessary for creating an operating environment in which a manufacturer can integrate its supplier capabilities into its operational processes. These managerial efforts can be clustered into several components, namely management responsibility, supplier selection, supplier development, supplier integration, quality measurement and conducting supplier audits. Fernandez,(1995) posits that supplier selection, supplier development and supplier integration can be regarded as forming an SQM system, with management responsibility seen as the driver of the system. In order to compete effectively in the world market, a company must have a network of competent suppliers. Supplier assessment and selection is designed to create and maintain such a network and to improve various supplier capabilities that are necessary for the buying organization to meet its increasing competitive challenges. A firm's ability to produce a quality product at a reasonable cost and in a timely manner is heavily influenced by its suppliers' capabilities, and supplier performance is considered one of the determining factors for the company's success (Krause et al, 2000), Lyman, and Wisner, (2002) Consequently, without a competent supplier network, a firm's ability to compete effectively in the market can be hampered significantly.

Paul *et al.* (2008) explains that for purchasing managers, the evaluation and monitoring of supplier performance is also a critical responsibility. Price has been traditionally considered as the single most important factor in evaluating and monitoring suppliers. Changes in competitive priorities have also seen other dimensions of performance, including quality, delivery and flexibility become increasingly important. Consequently, in order to maintain effective partnerships, the buyer must continuously monitor supplier performance across multiple

dimensions and provide feedback for improvement. Many studies have been conducted in the area of supplier monitoring and evaluation Ho *et al.*, (2007) for instance investigated the contribution of Supplier Evaluation and Selection Criteria in the Construction Industry in Taiwan and Vietnam and found out that non-quantifiable criteria play a very important role in the selection process and that the construction companies with the common appraisal criteria being product quality, product availability, delivery reliability, product performance, product cost and service after sale.

6. The Conceptual Framework.

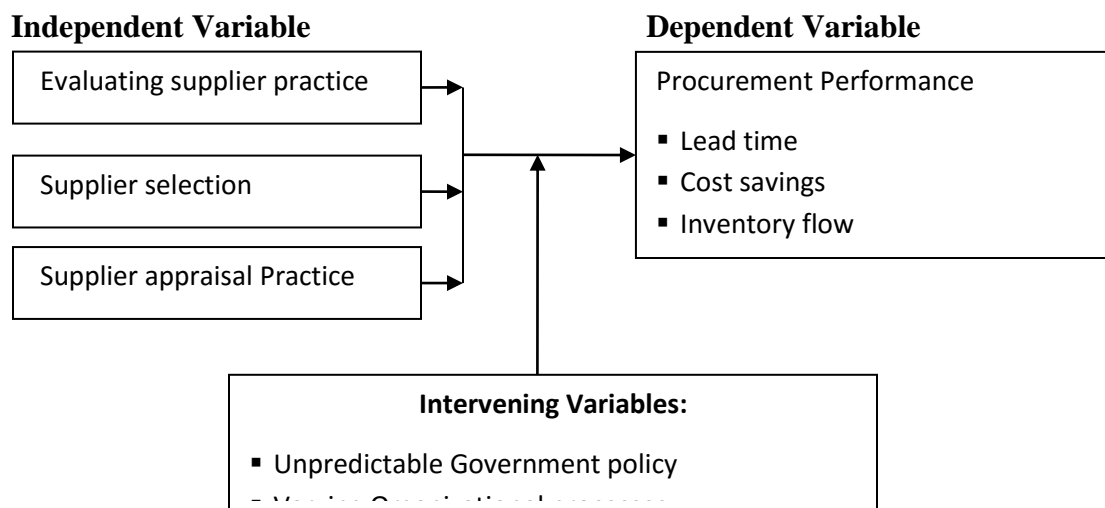


Fig. 1: Influence of supplier quality management practices on procurement performance.

7. Research Methodology

A descriptive research design was employed to collect data for this study. The target population for the study was the top management and procurement staff in the procurement department totaling to 58 respondents. This population was targeted because they are directly involved with the suppliers and they are the ones who know the supplier quality management practices used in order to select optimal suppliers. Census sampling technique was used in this study. Both primary and secondary data which was analyzed using descriptive statistics like percentages and frequency tables, Pearson's correlation analysis was determined for the variables under this study.

RESULTS AND DISCUSSION

8. Firm Specific Characteristics

The firm specific characteristics were assessed in terms of supplier quality management practices and procurement performance at National Hospital insurance Fund.

Table 1: Firm Specific Characteristics and Supplier performance evaluation (n=50)

Supplier performance evaluation Activities	Low	Average	High	V. High	μ	SD
	%	%	%	%		
Extent of supplier responsiveness to customer concerns	.0	1.2	68.5	30.2	4.29	.48
Extent of on time delivery for products required by customer	.0	25.9	56.8	17.3	3.91	.65
Level of technical knowledge of the products supplied	.0	56.8	20.4	22.8	3.66	.83
Cost competitiveness of the products supplied by our suppliers	1.2	57.4	27.2	14.2	3.54	.75
Suppliers value and maintain good relationships with their customers	1.2	45.7	49.4	3.7	3.56	.59

1-V.Low, 2-Low, 3-Average, 4-High, 5-V.High

The individual mean response scores (μ) for each of the items was above 3.50 and the mean score for all stood at 3.792. On a scale of 1 to 5 scored from “very low” to “very high,” this means that the ratings in both cases were “high” implying the respondents agreed the practice of supplier performance evaluation was high at National Hospital insurance Fund in Kisii. The values of the standard deviations (SD) as shown in column 10 are small. This means that there were minimal variations in the responses on the items that were rated implying that NHIF emphasized the activities of supplier performance evaluation more or the same way. The items scored attracted close ratings. These results imply that National Hospital Insurance fund, Kisii branch is proactively engaging with suppliers on supplier evaluation issues albeit differently according to category. Theoretical and empirical comparison of these results is essential. The results support argument by Paul *et al.* (2008) who explains that for purchasing managers, the evaluation and monitoring of supplier performance is also a critical responsibility. He further argues that price has been traditionally considered as the single most important factor in evaluating and monitoring suppliers. Changes in competitive priorities have also seen other dimensions of performance, including

quality, delivery and flexibility become increasingly important. Consequently, in order to maintain effective partnerships, the buyer must continuously monitor supplier performance across multiple dimensions and provide feedback for improvement. These dimensions may be both tangible (e.g. operational performance) and intangible (e.g. relationship status), and should provide timely information to suppliers which both communicate buyer expectations and, where necessary, enables corrective action to be undertaken.

Table 2: Supplier appraisal and Procurement Performance (n=50)

Supplier appraisal Activities	Low	Average	High	V. high	μ	SD
	%	%	%	%		
Extent to which we carry out an assessment of the level of competence of key personnel within the suppliers organization	.0	25.9	71.0	3.1	3.77	.49
Extent to which we measure total acquisition cost of suppliers rather than just their prices	.0	27.2	45.1	27.8	4.01	.74
Extent of analysis of suppliers' cash resources and financial ability over a reasonable period of time	.0	29.0	47.5	23.5	3.94	.72
We keep a record of the consistency of delivery and quality with evidence of improvement over time	.0	49.4	34.0	16.7	3.67	.75
Extent to which we ask for evidence of supplier commitment to the buyer organization in terms of quality	1.2	45.7	36.4	16.7	3.69	.76

The individual mean response scores (μ) for each of the items was above 3.50 and the mean score for all stood at 3.816. On a scale of 1 to 5 scored from “very low” to “very high,” this means that the ratings in both cases were “high” implying the respondents agreed the practice of supplier appraisal was high at NHIF. The values of the standard deviations (SD) as shown in columns are small implying deviation from the mean score of the scores on the activities of supplier appraisal was minimal. None had SD above 0.76. The items scored attracted close ratings. These results imply that NHIF, Kisii branch is proactively appraising its suppliers though differently according to category of firms involved in supply of products. These results compare with and contrast with theoretical advances and a number of past studies. They contradict the findings of the study by Kariuki & Nzioki, (2010); Luchali & Ombati, (2013) who have shown that supplier appraisal and management has been of less importance considering its strategic value to the organization meaning that it should not be emphasized in organization.

The correlation between evaluating the supplier performance and lead time, cost savings and inventory flow is positive and significant with correlation coefficients of 0.716, 0.673 and 0.522 respectively and $p < 0.01$ level of significance. This implies that if NHIF evaluates the performance of its suppliers effectively before awarding them a contract to supply, then better procurement performance will be realized in terms of improved lead time improvement, cost savings and improved inventory flow as these variables are positively correlated. The correlation between supplier appraisal and lead time, cost savings and inventory flow were positive and significant with correlation coefficients of 0.760, 0.783, and 0.502 respectively, $P < 0.01$. The highest correlation coefficient however was realized between supplier appraisal and cost savings with a correlation coefficient of 0.783 implying that NHIF procurement staff conduct supplier appraisal effectively. The positive correlation coefficients mean that enhancing supplier appraisal activities would improve procurement performance measured in terms of cost savings in the same direction. The correlation between supplier selection and procurement performance constructs of National Hospital Insurance Fund gave correlation coefficients of 0.594, 0.633 and 0.785 respectively. This implies that when proper mechanisms are put in place to select the right suppliers competitively, procurement performance would be realized. These findings are in agreement with the assertions of Kavale and Mwikali (2012) who indicated that the choice of criteria in supplier evaluation and selection process has a great influence on procurement performance and management. The findings also concur with the results of the survey by Vonderembse and Tracey (1999), who found out that implementing supplier selection criteria, has a positive influence on procurement performance.

Table 3: Correlation of Supplier quality management practices and procurement performance

	Evaluating supplier performance	Supplier appraisal	Supplier selection	Lead time	Cost Savings	Inventory flow
Evaluating supplier performance	1					
Supplier appraisal	.153	1				
Supplier selection	.210	.352	1			
Lead time	.716**	.760**	.594**	1		
Cost Savings	.673**	.783**	.633**	.442**	1	
Inventory flow	.522**	.502**	.785**	.598**	.627**	1

** . Correlation is significant at the 0.01 level (2-tailed).

11. Conclusion

Based on the findings on the first objective, a positive and significant relationship existed between supplier performance evaluation and procurement performance in NHIF. In the second objective it was noted that, a positive and significant relationship between supplier appraisal and procurement performance existed. In the third objective, the study findings indicate that a positive correlation existed between supplier selection and procurement performance.

12. Recommendations

In respect to the first objective, the research recommends that NHIF and other procuring entities, should transparently vet prospective suppliers in order to meet procurement performance standards. Based on the findings and conclusion on the second objective, the study recommends that public institutions should always appraise their suppliers to enhance procurement performance thus an assurance to get value for money. As per the third objective the study recommends that public institutions should embrace supplier selection thus an assurance of ethically awarding contracts to the right suppliers, which will in turn boost procurement performance by acquiring right goods and services. NHIF procurement department should also strictly adhere to the guidelines of Public procurement Oversight Authority in their procurement undertakings in order to maintain or improve its corporate image.

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