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Effects of Supplier Development on Procurement Performance in Bungoma County: A Case of Nzoia Sugar Company

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Abstract: **Supplier development has become a critical factor for the Procurement function's success. Supplier development allows a buying firm with regard to its supplier to increase the performance and/or capabilities of the supplier to meet the buying firm's supply needs through efficiency and effectiveness of its operations. It is one mechanism used to enable fast lead times, control of inventory, relationship and production costs through the supply chain. The main purpose of the study is to determine the effect of supplier development on purchasing performance. Specific objective is to determine the effect of supplier incentives on purchasing performance. The study based on the Theory of Constraints, Transaction cost Economies and Resource Dependence Theories. Descriptive research design through a case study on Nzoia Sugar Company in Bungoma County was used to undertake the study. The study targeted Department Heads, Heads of sections and section officers. Data was collected from a 96 out of the initial target of 116 respondents. The research instrument was tested for reliability by computing Cronbach alpha statistical tests which yielded a score of 0.791. Data was cleaned descriptive and inferential statistics. Descriptive statistics like means, frequencies and percentages were used. In addition, Pearson correlation was used to show the correlation between the variables which revealed a positive and significant results between supplier incentive and procurement performance ($p<0.01$, $r = 0.716$. Multiple regression was used to test the study hypothesis when significant at the 0.01 level had $F=23.790$, $Sig=0.000$, $p<0.05$).The study recommends that Nzoia Sugar Company should focus on identifying classifications of suppliers and ensure that they communicate this throughout the company, and adopt a supplier development matrix for its monitoring purposes. This study will help businesses develop the right capacities and strategies in the key aspects that sugar manufacturing companies can use for developing suppliers and form a basis on which other researchers can make reference**

Keywords: **Supplier development, Procurement performance, Supplier incentives, Bungoma County.**

1. INTRODUCTION

It is widely recognized that in order to compete and survive, companies must seek, build up and maintain relationships with capable suppliers and realize the maximum value through such relationships (Carr and Sheltzer, 2012). Knudsen, (2003) suggests that good supplier relationship and development programs, allow for organizations to enhance their procurement performance. Procurement performance starts from purchasing efficiency and effectiveness in the procurement function in order to change from being reactive to being proactive to realize set performance objectives. Furthermore, with external procurement expenditure accounting for up to 60 or 70 per cent of the budget in many industries (Christopher, 2005) notes that organizations have to work with suppliers to facilitate and realize substantial cost savings and cannot limit such efforts to their firm boundaries. The specialized competencies residing with suppliers may influence a buying entity's innovativeness, performance and ability to offer high-quality products (Bessant, 2004). On the other side, inconsistent quantity in a supply chain network can be linked to lack of trust between the supplier and buyer, low supplier's performance and inflexibility to change, lack of coordination and training, poor motivation and fragmentation of information between supplier and buyer (Johnson and Scholes, 2009). The impact of this to any organization is reduced procurement performance, high inventory, and decreased capability to meet customer needs, decreased market share, long lead times and decreased profits. The relationship of supplier practices with performance has been tackled in several studies (Wagner and Boutellier, 2002; Krause*et al*., 2000; Forker and Hershauer, 2000). Harps (2001) affirms this as his study focused on the relationship between supplier development and its impact on the firms' performance using both financial and market criteria, including return on investment (ROI), market share, profit margin on sales and overall competitive position. The global sugar industry is one of the world's oldest agriculturally based industries, which is estimated to yield approximately 167 million tons of sugar with an ever growing consumption rate, which on average, increases at 1.8% per annum (Wachiye, 2012). Sugar is produced by more than 100 countries in the world including the Common Market for Eastern and Southern Africa (COMESA) is a preferential trade area consisting of African countries stretching from Egypt to Zimbabwe in which Kenya is a party to. Pursuant to this, there was a surge of sugar imports from the COMESA sugar producing members into the country which affected negatively on the performance of the domestic sugar market. Kenya appealed and was granted a COMESA safeguard window in 2002,which was renewed in 2003 and extended to allow for the response of the key players manufacturers to have the industry competitive (Wachiye, 2012). In order to balance local and global competition, firms in the sugar sector are struggling to optimize their profits through performance of the procurement function to enhance low-cost sourcing and this limits the measurement to supplier capability, quality and discounts. The overall effectiveness and efficiency of the procurement function change over time and hence need to be assessed and modified on a continual basis. It is therefore against this kind of background that the researcher finds it necessary to study the responses of the sugar company's procurement performance from Bungoma County in Kenya to the competitive environment through the creation of strategies that improve service delivery through collaborative working relationships with their key suppliers to meet supply needs, stakeholder and customer expectations.

Statement of the Problem

The sugar manufacturing companies in Kenya are facing a stiff competition for the cane that is quickly getting depleted. The supply to these sugar manufacturing firms is reducing with increase of both local and international new entrants into the industry. This has led the firms to foster supplier development and relationship mechanisms by providing subsidized cane seeds and fertilizers, free agricultural training, financial assistance and providing technical support to farmers and other suppliers who supply fertilizers, sugar ingredients, machine parts and components and packaging materials to the buying firm. However, the cost of sugar production in Kenya is high compared with other countries. The world market price of sugar ranges between US$ 125 and 168 which is well below the cost of production of Kenya where it averages US$ 500 per ton. At farm level, there are poor cane husbandry practices leading to low yields in quantities per hectare, use of poor seed variety results in low sucrose content and late maturity (Institute of Economic Affairs, 2013). This does not compare well with other regional sugar producers. Moreover, the Kenyan total field cost of sugar production is $US 420 per ton. In Sudan for example, the average cost of production is US$230 per ton. Other factors that are responsible for the high costs of production include; high costs of cane procurement (70 percent of cost of production goes to procurement), harvesting and handling charges, costly inputs – high costs of fertilizers, herbicides, agricultural equipment such as tractors are too expensive(Institute of Economic Affairs, 2013). Quesada *et al*., (2010) rightly pointed out that supplier development is the most influential management process for achieving continuous material supply, product quality and customer satisfaction by enhancing procurement performance. Therefore, this paper aimed at establishing the effect of supplier development on procurement performance by conducting a study on Nzoia Sugar Company in Bungoma County, with reference to supplier training, supplier incentives and type of supplier relationships as key independent variables. This provides basis for development of strategies for curbing supply risks associated with unhealthy competition, and hence need for proper Supply Chain Management in the sugar sector.

Objectives

The general objective of this study was to investigate the effects of supplier development on procurement the performance in Nzoia Sugar Company in Bungoma County.

Specific objectives

To determine how supplier incentive programs affect the procurement performance in Nzoia Sugar Company.

Research questions

Does supplier incentive programs have effect on the procurement performance in Nzoia Sugar Company?

Research Hypothesis

The study tested the following hypothesis:

Ho1: Supplier incentive programs have no effect on procurement performance

2. CONCEPT OF PROCUREMENT PERFORMANCE

Procurement performance is the pillar of a company's success as it contributes to competitive purchase and acquisition of quality goods that puts the organization products or services in the competitive edge in the market. Nevertheless, poor procurement performance has led organizations financial loss due to delivery of poor quality work materials, loss of value for money and inflated prices. Low procurement performance also contributes to decrease of profitability (Juma, 2010). According to (Migai, 2010), poor procurement performance is a major hindrance to organizational growth since it causes the delay of delivery, increase of defects, delivery of low quality goods or non-delivery at all. Main causes of poor procurement performance has been linked to incompetent staff, traditional procurement procedures, poor coordination of procurement activities, lack of quality assurance policies and lack of proper regulations Juma (2010).

Performance Measurement

Neely et al.,(1999) define performance measure as, "a metric used to quantify the efficiency and/or effectiveness of an action" while performance measurement as, "the process of quantifying the efficiency and effectiveness of an action" (Neely *et al*., 1999). Purchasing performance is considered to be the result of two elements: effectiveness which is based on results actual / results planned (material costs, quality, logistics, innovation) as efficiency is based on cost actual / cost planned (e.g. administrative lead times, orders per purchaser) Weele (2010).

Influence of supplier incentive programs on procurement's performance

Supplier incentives is a strategy which encourages suppliers to improve their performance including increased business volume, priority consideration for future business and recognition of good supplier performance in the form of awards or certificate (Monczka*et al*., 1993, Krause and Ellram, 1997). The buying firm provides incentives to motivate suppliers who desire for increased volume of business and priority consideration for future business (Krause *et al*., 2000). Therefore, this supplier is more likely to continue business operations and open their facilities, extend their resources investment, including provide greater commitment in joint knowledge transfer (Modi and Mabert, 2007).Humphreys, *et al*., (2011), note that rewards for supplier's improvement area stimulating tool that indicates buyer's recognition and provides incentive for further outstanding achievement. Furthermore, joint action between both parties is part of transaction-specific supplier development as a non-equity mode of governance in which both buyers and suppliers cooperate on certain activities that are important for improving the performance of both parties. Research by (Blonska, Rozemeijer, and Wetzels, 2008) established that supplier development encourages preferential buyer status and supplier adaptability. Supplier development also helped in developing mutual trust between buyers and suppliers (Reed and Walsh, 2002). BMW strived to be 20% above industry average in quality performance. Management believed supplier development made it possible to attain that quality standard and increase in revenue (Rhodes, Warren, and Carter, 2006). Also, at Honda dramatic improvement was seen in product quality since they began to develop suppliers. A quality level of 7000 defects per million was improved to only 100 defects per million (Berlow, 1995). A team of purchasing professionals from Honda of America worked with 12 stamping suppliers to reduce cost by $4 million in six months in 1Supplier incentives are offered to suppliers who succeed in increasing performance and capabilities in supplier development program and serve a least two roles (Krause and Ellram, 1997) by firstly being a motivating tool for suppliers, since suppliers may strive for award status if it means recognition in the marketplace and allows them to attract new business; secondly, it marks the culmination of the supplier development effort with a particular supplier through its supplier development efforts (Berlow, 1995).

3. RESEARCH METHODOLOGY

Research design

The research adopted descriptive design to collect the quantitative and qualitative data that describe the effects of supplier development on procurement performance. This research study considers gathering of consistent and accurate data, as such, the study adopting a descriptive survey design. According to Merriam (2009) descriptive research is used to obtain information concerning the current status of the phenomena to describe what exists with respect to variables. The study focused on Nzoia Sugar Company, thus a case study. Kothari (2008) highlights that case study is a way of organizing data and observing the object to be studied as a whole. There are two main advantages of utilizing case study approach: Its ability to let the subject unfold naturally, to refine concepts and frames of reference while studying the phenomena and it enables the researcher to understand and capture the dynamics of the process of change (Galliers, 1992).

Data Analysis and Presentation

Data was coded and entered into a Statistical Package for Social Sciences (SPSS) version 20 for data syntheses and analyses. Both descriptive and inferential statistics was employed in the study. Quantitative data was analyzed using descriptive statistical method; the statistical tools such as mean, mode and standard deviation were used. Inferential statistics were used. The correlation and regression model was employed to compute the relationship between the independent and dependent variables at a confidence level of 95% (Hair et al., 2005). Graphs and frequency tables were used to summarize the data and capture descriptive results. The regression equation employed is as follows;

$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$

Where α is the intercept;

Y = Purchasing performance (Dependent Variable);

$\beta 1$, …… $\beta 3$ = Regression Coefficients;

X1 = Knowledge transfer and Supplier Training;

X2 = Supplier Incentives; X3 = Type of relationship and ε = Error rate.

4. RESEARCH FINDINGS

The use of supplier incentives

The study sought to determine whether the respondents were aware of the utilization of supplier incentives in Nzoia Sugar Company. The results are presented in figure 1 below:

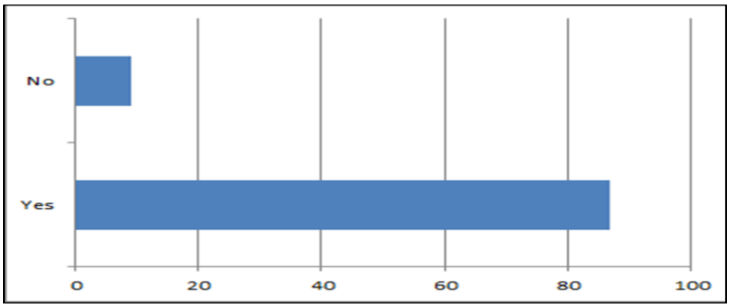

Figure 1: The use of supplier incentives

Perception of impact of supplier incentives to procurement performance

The study further assessed whether the supplier incentives have an impact on procurement performance at Nzoia sugar. The results are shown in figure 2. below:

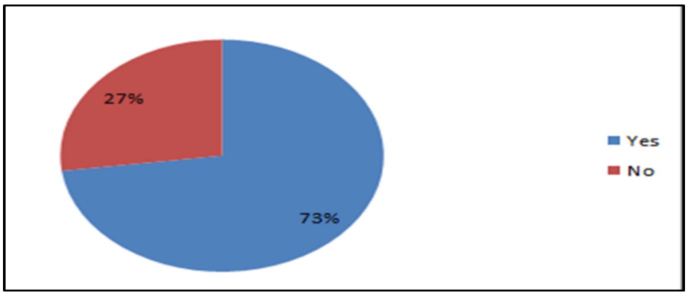

Figure 2: Perception of supplier incentives to procurement performance

As illustrated in figure 2, 73% of the respondents said that giving incentives to suppliers in terms of certificates, awards, financial assistance and preferred status, has an impact on the organizations procurement performance, while 27% were of the opinion that supplier incentives does not have an impact on procurement performance.

Forms of incentives offered

The study investigated on the various incentives offered by Nzoia Sugar Company to its suppliers as a way of managing the supplier development program and its impact on procurement performance. The results are shown in figure 3 below:

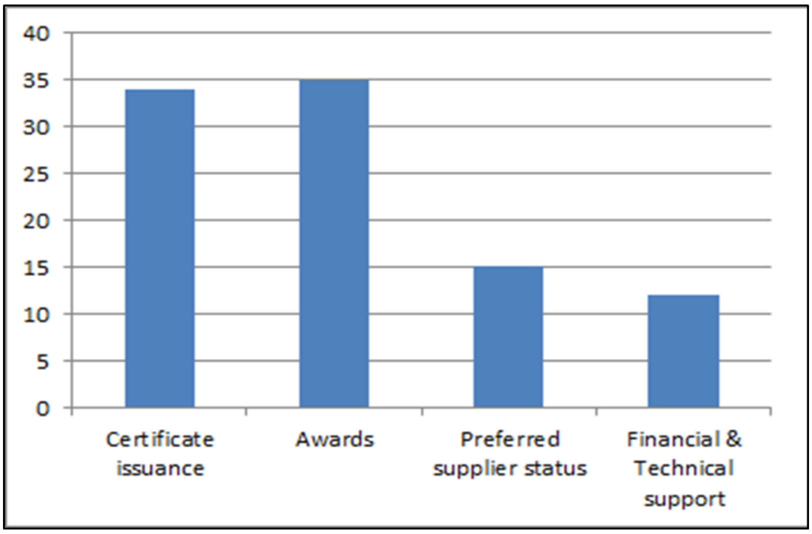

Figure 3: Forms of incentives

From results in figure 3, the respondents' perception on the forms of incentives show that a majority of them who represent 35 personnel said that awards are offered to suppliers, as 34 mentioned the issuing of certificates, as 15 mentioned preferred supplier status and 12 said financial and technical support.

Supplier incentives on procurement performance

The research further sought to establish supplier incentive indicators can impact procurement performance. The respondents were asked to rank their procurement objectives followed by ranking the SP practices implemented to a scale of 1-5, 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree. The results are shown in table 7

Supplier incentives indicators

It was evident that most respondents were of the opinion that price inflation has been managed with adoption of knowledge and supplier training with a mean of 2.76 (std.dev 0.96), realized purchasing cost savings had a mean of 2.71 (std.dev 1.04) and enhanced return on investment at a mean of 2.65 (std.dev 1.04). Procurement performance was also improved with reduction of sampling reject rates with a mean of 2.64 (std.dev 0.67), shorter product development time with a mean of 2.60 (std.dev 0.96), lower quality cost per supplier a mean of 2.57 (std.dev 1.06). However, they were not convinced that the purchasing department time and workload (mean 2.29), budget transparency (mean 2.29) and auditing (mean 2.28) were realized due to supplier training. Findings revealed positive and significant results between supplier incentive and procurement performance ($p<0.01$, $r = 0.716$) The findings supported hypothesis

Regression Analysis

From the regression table, in model 1, the Knowledge transfer and supplier training variable was entered and results indicate that it accounts for 1.9% variation in procurement performance. Model 1 is not statistically significant in explaining procurement performance (Sig=0.278, $p>0.05$, F=1.198). In model 2, the researcher added supplier incentive and the model becomes statistically significant (Sig = 0.000, $p<0.05$, F=34.510) and the R Square increases to 51.6%. Supplier incentive therefore accounts for an increase of 51.6% in the variation in procurement performance. The only significant predictor is supplier incentive (Sig=0.000, $p<0.05$. The variable with the positive and highest beta is supplier incentive.

5. SUMMARY OF FINDINGS

The study sought to determine the effectiveness of supplier development through supplier incentives. The main procurement measures were from the effectiveness aspect which included managing of price inflation, purchasing cost savings and return on investment, however did not provide statistical significance to the procurement performance. This can be contributed to the level of supplier development levels adopted. The study found that supplier incentives given to suppliers by the Nzoia sugar company positively affected its procurement performance. It had the only significance results of Significance at 0.01 level with .000, $p<0.05$. This was in terms of offering of certification, awards, preferred supplier status and financial support. Financial soundness of suppliers facilitates timely meeting of financial obligations, increases supplier competitive edge and thus are able to continuously supply materials and/or goods to Nzoia Sugar. This findings support the findings of Wagner (2006) who reported positive association between financial stability with organizational performance.

6. CONCLUSION AND RECOMMENDATIONS

Study findings revealed that supplier development has a significant on the procurement performance, both in terms of effectiveness and efficiency aspects of measurement. This means that with dynamic customer tastes, world economy and the shrinking supply base, there is a drastic increase in pressure on the manufacturing firms to find new ways of building relationship with key suppliers through supplier development, find was in which they can motivate and nurture the supplier relationships. To implement supplier development, purchasing companies need to closely monitor their supplier’s performance, so that they are able to pick out those who meet their requirements. This can be in terms of quality, timeliness of deliveries, quantity and price. Moreover, buying firms should continually review and evaluate the performance of their suppliers so as to find ways of improving both their business practices, identify and seal any gaps through technical support, financial support and through training. With suppliers making a significant contribution to a company's competitive position, it would be a wrong if companies were to neglect the potential of supplier development practices as an improvement in the procurement function affects the overall performance of the organization. Therefore, for manufacturing or purchasing firms faced with problems of low supplier performance, they can implement a wide range of supplier development practices such as improving the supplier technical capability, leveraging supplier financial position, supplier recognition, and supplier training in order to upgrading the performance and capabilities of the weakest links in their supply chain. The study recommends that Nzoia Sugar Company, should focus on identifying classifications of suppliers and ensure that they communicate this throughout the company. It allows for all departments put across areas of which they deem important, thus develop a matrix that they can use to assist deserving strategic suppliers in their supply chain to attain financial stability and technical capability through knowledge transfer and training. Financial stability compounds to grow profits for the suppliers and having lenders, investors and employees to be willing to deal with financially stable businesses upon favorable terms. Nzoia sugar can also develop classes of which they have their supplier developed. This is because they would be limited financially, in terms of human resources and time as well. Therefore, with regards to the created matrix, upgrade well performing suppliers to more advanced supplier development programmes. Finally, the supplier development programme may not give feedback if the supplier development programme has no real systematic process to measure the effectiveness of its utilization. Therefore develop checks and balances and a feedback loop as well, that allows for areas that need concern to be improved. Given the globalization of many companies and their diverse supply base it would be important to have valid measures of supplier development success, in terms of short-term key performance indicators and measures of long-term relationship-specific and competitive advantage outcomes.

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