Effect of Supplier Responsiveness on Procurement Performance In County Governments, Kenya

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Abstract: *The main purpose of the study was to establish the effect of supplier responsiveness on procurement performance. The researchers used a sample size 54 employees drawn from procurement department of Kakamega County. Stratified and simple random sampling was used in this study. Questionnaire was used to collect data. Data was analyzed through statistical methods such as means, standard deviation, frequencies and percentage. Inferential analyses were used in relation to correlation analysis and regression analysis to test hypothesis. Study findings showed that supplier responsiveness had positive and significant effect on procurement performance. Thus, supplier responsiveness plays a key role in increasing procurement performance. the study therefore recommends that there is therefore need for county government to source for supplier who respond in time and supply product within the given time.*
Keywords: *Procurement, Performance, Responsiveness, Supplier*

I.   Introduction.

Procurement performance is the process by which procurement establishes criteria, based on strategic planning goals, for determining the results and quality of its activities. It involves creating a simple, effective system for determining whether procurement is meeting its objectives (Sohal, 2002). According to Van Weele (2006) procurement performance is considered to be the result of two elements: purchasing effectiveness and purchasing efficiency. Performance provides the basis for an organisation to assess how well it is progressing towards its predetermined objectives, identifies areas of strengths and weaknesses and decides on future initiatives with the goal of how to initiate performance improvements. This means that procurement performance it is important to understand the drive of procurement performance such supplier responsiveness (Lardenoije, Van Raaij, and Van Weele, 2005).

Supplier responsiveness is a boundary-spanning course of action facilitating reconfigured resources and sourcing activities in response to global threats and opportunities in the market place (Tsai et al., 2009). It has been clearly established that, buyer-supplier network ties and alliances in terms of production and distribution plans are positively associated with responsiveness (Dong et al., 2007 and Danese, 2011). So also it's evident that, coordinated ability to effectively link and developed dispersed location networks is an integral tool multinationals firms world class responsiveness (Kim et al., 2003). While other postulates that, inward and outward cross functional teams knowledge spill over is greatly associated with responsiveness (Kohli et al., 1993). Hence, organizations need to check how their suppliers respond to their needs always. Supplier responsiveness is critical in new product development and can directly affect the time-to-market of a firm. It's suggested that failure to include suppliers' inputs in product development is a vulnerable aspect of supply chain management. Responsiveness could be standouts amongst the most essential element abilities which help firms accomplish more prominent competiveness in front of rivalry in production network connections. Higher supplier responsiveness is emphatically identified with enhanced client fulfilment and upgraded business sector execution (Kim et al, 2006). Thus it is central that the exercises which can advertise better connections and thus better supplier responsiveness ought to be placed set up (Holweg, 2005). Search on relationship between supply chain performance and supply Chain responsiveness of supermarkets in Nairobi was viewed (Joash et al, 2012). Public procurement systems are central to the effectiveness of development expenditure. Budgets get translated into services largely through the governments' purchases of goods, services and works. It is estimated that 18.42% of the world's Gross Domestic Product (GDP) is spent through public procurement (Mahmood, 2010). It is further estimated that public procurement accounts for 9%–13% of the GDP of the economies of developing countries. In Angola, public procurement accounts for 58%, it accounts for 70% of public spending (Thai, 2001), 40% in Malawi, , 58% in Angola, 70% of Uganda's public spending (Basheka and Bisangabasaija, 2010), and 60% in Kenya (Akech, 2005). But the area of procurement is increasingly prone to internal factors (Trionfetti, 2000).

Ngugi and Mugo, (2010) established that that the performance of public procurement function in Kenya is affected by these factor. However, their study did not bring out clearly the issue of how supplier responsiveness affect the management of the procurement function. It should be noted that these factors present themselves differently under different operational managerial environment. Given that the management team

responsible for manning the procurement function at Kakamega County operates under a distinct operational environment and has distinct composition, it is important to understand how supplier responsiveness affects the effective management of the procurement function in this area. As such this study hypothesised that;

$H_{01:}$ Supplier responsiveness has no significant effect on procurement performance?

II.   Literature Review

Responsiveness can be defined as the ability to react purposefully and within an appropriate time-scale to customer demand or changes in the marketplace, to bring about or maintain competitive advantage and high procurement performance (Holweg, 2005). In contrast, a supply chain would be considered efficient if the focus is on cost reduction and no resources are wasted on non-value added activities (Naylor, Naim and Berry, 1999). Supply responsiveness refer to ability to react purposefully and within an appropriate time-scale to customer demand or changes in the marketplace, to bring about or maintain competitive advantage".

Firms need to be responsive to customers' unique and rapidly changing needs. Companies are now seriously exploring the potential of the concept of supply chain management (SCM) to improve their revenue growth. In particular, they are attempting to develop agile supply chains to get their product to market faster at a minimum total cost. Effective SCM is an essential strategy for success in the global and e-markets. SCM incorporates the entire exchange of information and movement of goods between suppliers and end customers, including manufacturers, distributors, retailers, and any other enterprises within the extended supply chain. The responsive supply chain (RSC) addresses new ways of running companies to meet these challenges. RSC represents a global industrial paradigm for manufacturing in the twenty-first century. In a changing and competitive environment, there is a need to develop in a cost effective solutions to organizations and facilities that are highly flexible and responsive to changing market/customer requirements. The objective here is to describe a framework for building a supply chain that is flexible and responsive (Artley, 2001).

David, (2002) argues that a responsive supply chain is a network of firms that is capable of creating wealth to its stakeholders in a competitive environment by reacting quickly and cost effectively to changing market requirements thus able to improve the procurement performance. There is a need to meet the changing market requirements by developing a suitable network of collaborative firms based on the core-competencies and on leveraging people and information as quickly as possible and in the most cost-effective manner.

The responsiveness of supply chains to changing market requirements and their overall efficiency are important issues in supply chain design and management and therefore currently receive wide attention in the scientific community as well as in practice thus helping in improved procurement performance (Shaw, 2001).

Companies have three principal means to buffer against changes in quantity demanded for specific products, namely inventory, capacity and time. Safety stocks, excess capacity and safety lead times all provide a time buffer to be able to react to demandvariability (Hopp and Spearman, 2004). One could argue that one sensible approach to increase responsiveness could be to raise the inventory levels of finished goods or components, which would allow more flexibility for reactions to changes in customer demand. Increased inventory levels do, however, reduce the efficiency of the supply chain since they are costly, both in terms of storage cost and cost of capital (Spearman 2004)

Providing the right degree of responsiveness and having an efficient supply chain at the same time is a goal that is hard to achieve and that typically involves trade-off decisions by management, since increased responsiveness can be perceived to come at the expense of reduced efficiency, and vice versa. However, there may be strategies; such as revised planning approaches, that restructure supply chain processes to achieve both goals at the same time and enable a supply chain to be responsive and efficient simultaneously. Many authors see responsiveness and efficiency as distinct strategies that are strongly linked to different types of products. Fisher, for example, distinguishes innovative products with short product life cycles and functional, more commodity-like products (Hopp, 2004).

Management of supply chain responsiveness is particularly important when operating in a competitive market where short lead times might be critical and inventory which can allow fast response is risky e.g., due to product obsolescence, costly and therefore reduces efficiency. These aspects become even more important for innovative products with short product life cycles, where management of supply chain responsiveness is seen as a crucial capability. At the same time, more commodity-like, functional products generally require more efficient supply chains, combined with minimisation of the bullwhip effect. When supply chains are more able to react to changing market requirements than necessary i.e., having achieved a higher than necessary degree of responsiveness customers will have to carry the additional cost, which is also problematic (Aitken, Childerhouse and Towill, 2003).

Baldry, (2002) in his study argues that to improve supplier responsiveness and hence procurement performance, supply chain organizations have transformed processes and added IT capabilities that reduce cost, improve responsiveness and increase performance. The build-to-forecast model has evolved into a demand-driven supply chain, utilizing postponement and build-to-order capability to provide high service levels at a

reduced cost. Functional supply chain silos have been eliminated by aligning incentives and integrating end-to-end processes to improve efficiency and reduce cycle time. The linear supply chain has evolved into the networked supply chain as companies have outsourced increasingly strategic operations and increased the use of multi-tier supplier relationships.

2.1 Theoretical review

This study is anchored on The Theory of Constraints (TOC) developed by an Israeli physicist E. Goldrat which claims that each system has at least one constraint. This philosophy is applied in many functional areas of companies, ranging from production flow management, marketing, accounting or project management to being a tool of logical reasoning. In this paper, the authors show how the Theory of Constraints can be applied in supply chains, with special attention paid to TOC- based stock management principles which are implemented in the county government. According to Cyplik, Hajdul (2008) the supplier can increase the capacity of the constraint by redesigning products, increasing stock or enhancing production capacity, which enables quick response to changing customers' demands. Theory of constraints (TOC) tools may be combined in the integrated development of responsive and efficient supply chains

2.2 Conceptual Framework

Form the literature review above theoretical framework which includes theory of constraint and Supplier Responsiveness have been well discussed in relation to the study variables. Further the researcher has articulated review of critical literature of effect of Supplier Responsiveness on procurement performance and borrowing from the previous studies the below conceptual framework was formulated.
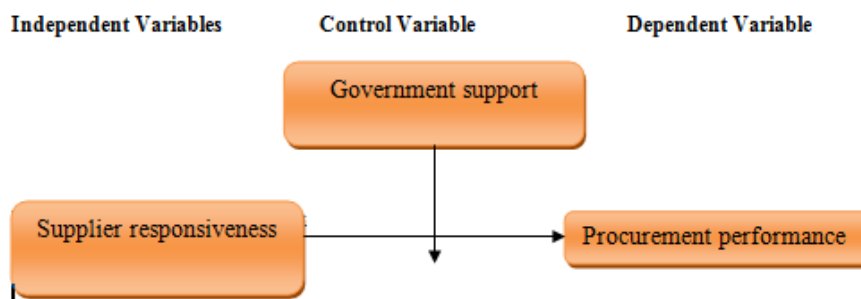

Figure 1Conceptual Framework
Source: (author, 2014)

III. Research Methodology

The research adopted descriptive study design. Descriptive research attempts to clarify why and how there is a relationship between two or more aspects of a situation or phenomenon. The target population for this study was 180 employees drawn from 6 procurement department of all sub counties in Kakamega County. Stratified sampling method was used with proportional allocation to categorize data into sub counties. The method was used due to assortment nature of users. The study used Yamane (1967:886) simplified formula to calculate sample sizes of 54 employees. Data was collected using questionnaires which include a cover letter addressed to the respondents. In this study, internal consistence was measured using the Cronbach's Alpha method (Cronbach's 2004).

3.1 Data analysis

The data was analyzed using both descriptive and inferential statistics. It was represented by use of tables. Inferential analysis was used to draw conclusions concerning the relationships.

IV. Analysis and Findings

This section presents data collected using the questionnaire. The findings in this chapter were also arrived at by analyzing and interpreting the available data using SPSS software version 20. The results of the study showed that majority 59.2% (20) were female and 40.8% (14) were male. The findings indicated that majority of the respondents are over 26 years of age and (83.5%) had worked for more than 7years and this provided responses based on a wider knowledge base of supplier client relationship. The above findings show that the respondents are highly educated. Thus for one to be a purchasing professional, having a Degree or professional qualification is paramount.

4.1 Descriptive statistic

Table 1 highlights the results on supplier responsiveness. From findings indicated that in county government are suppliers do not respond fast (shorter lead times) (mean = 2.44, SD = 1.042) and they do not supply us with whatever the county government need in time (mean = 2.61, SD = 1.037). However, suppliers that they take full responsibility on any complication that occurs during procurement process (mean = 4.5, SD = 0.924). Moreover, suppliers comply with our goods and service requirements (mean = 3.83, SD = 1.505).

Table 1 Supplier responsiveness

		SD	A	N	A	SA	Mean	Std. Deviation
Our suppliers respond fast (shorter lead times	*F*	2	23	2	8		2.44	1.042
	%	5.6	66.7	5.6	22.2			
Our supplier supply us with whatever we need in time	*F*	2	28	2	2	0	2.61	1.037
	%	5.6	83.3	5.6	5.6	0		
Our suppliers comply with our goods and service requirements	*F*	2	9	0	4	19	3.83	1.505
	%	5.6	27.8	0	11.1	55.6		
suppliers take full responsibility on any complication that occurs during procurement process	*F*	2	4	4	25	0	4.5	0.924
	%	5.6	11.1	11.1	72.2	0		

4.2 Procurement Performance

This section focuses on procurement performance. As shown in table 2, findings indicated that there is no reduced risk of non-supply (mean = 4.83, SD = 0.383). In the same way, in the county government there is reduced lead time (mean = 2.61, SD = 0.608). More study findings showed that most of the customer are not satisfied with county services (mean = 3.44, SD = 0.616).Finally, 50% (17) of the respondents strongly agreed that there is improved dependability and accuracy of deliveries (mean = 3.39, SD = 0.698).

Table 2 Procurement Performance

		SD	D	N	A	SA	Mean	Std. Deviation
Improved customer satisfaction	F	0	15	2	0	17	3.44	0.616
	%	0	44.4	5.6	0	50		
Reduced lead time	F	0	23	2	9	0	2.61	0.608
	%	0	66.7	5.6	27.8	0		
Reduced risk of non-supply	F	0	0	28	6	0	4.83	0.383
	%	0	0	83.3	16.7	0		
Improved dependability & accuracy of deliveries	F	0	17	4	13	0	3.39	0.698
	%	0	50	11.1	38.9	0		

4.3 Pearson Correlation

Pearson correlation were summarized and presented in Table 3 from the results, there is a clear and significant relationship between the independent variables and procurement performance. From the results, there is significant relationship exists between supplier responsiveness and procurement performance as shown by r value of .426 at a level of significance of $p < 0.05$

Table 3 Correlation Results

	procurement performance	supplier responsiveness
Procurement performance	1	
	0	
Supplier responsiveness	.426*	1
	0.019	
* Correlation is significant at the 0.05 level (2-tailed).		

4.5 Hypothesis Testing (Regression Analysis)

Regression analysis is a type of analysis used in finding out whether an independent variable predicts a given dependent variable, Mugenda and Mugenda (2003).The researcher chose to use both correlation statistic and regression analysis since the former tell the readers nothing about the predictive power of the variables. Table 4 illustrates the model summary of multiple regression model, the results showed that supplier responsiveness explained 56.5 percent variation of procurement performance (R squared =0.565). This means the rest 43.5%of the variation in procurement performance is explained by other factors. The large value of multiple R = .752 represents a large correlation between the predicted and observed values of the outcome Y. Adjusted R squared indicates the loss of predictive power or shrinkage, (how much variance in Y would be accounted for if the model had been derived from the population from which the sample was drawn). The results in table 4 shows that predictor variables have positive coefficients of 0.572 with p value of 0.000<0.05. Hence, hypothesis was rejected. Supplier responsiveness had positive and significant effect on procurement performance. In particular, supplier responsiveness to changing market/customer requirements builds a supply

chain that is flexible and cost effective hence heightening procurement performance (Artley, 2001).In a similar vein, David, (2002) argues that that supplier responsiveness enables firms to create wealth for its stakeholders since suppliers react quickly and cost effectively to changing market requirements thus improving the procurement performance. As well, Shaw, (2001) asserts that supplier responsiveness has received wide attention in the scientific community since it has helped in improving procurement performance.

Table 4 Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.259	0.502		6.494	0.000
supplier responsiveness	0.522	0.123	0.572	4.23	0.000
R Square	0.565				
Adjusted R Square	0.555				
F	112.146				
Sig.	0.000				
Dependent Variable: Procurement Performance					

V.   Conclusion and Recommendations

Based on the findings the study concluded that supply chain responsiveness is particularly important when operating in a competitive market. As such, suppliers are the ones responsible for the industrialization and manufacturing process. Furthermore, it was established that employees have joint development work with suppliers and that they take responsibility on any complication that occurs during the procurement process. Joint decision regarding the supplied materials is also made. the study established that supply chain responsiveness plays a key role in increasing purchasing performance. There is therefore need for county government to source for supplier who respond in time and supply product within the given time. Moreover, suppliers need take responsibility of any complication that occurs during the procurement process. The sample was drawn from only Kakamega County, thus this study may be limited in its generalizability of the findings. It can be replicated with a larger, more representative sample. It is also recommended that this study be replicated in different business sectors within Kakamega County.

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