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ROLE OF VENDOR RESPONSIVENESS ON PROCUREMENT PERFORMANCE AMONG GOVERNMENT MINISTRIES IN KENYA

^{1*} JESCA CHEPNG'ETICH,

^{1*}Post Graduate Student, Department of Procurement and Logistics

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

* Author's Email: jessicachepngetich2@gmail.com

² DR. JOHN ACHUORA,

Lecturer, Department of Procurement and Logistics,

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

Abstract

Purpose: The main objective of the study was to examine the role of vendor responsiveness on procurement performance among government ministries in Kenya.

Methodology: Descriptive research design was adopted. The study preferred this method because it allowed an in-depth study of the subject. The study used a sample size of 156 procurement staff. Census will be used in this study. Questionnaires were used to collect data. The questionnaires were tested for validity and reliability using 10% of the total sample respondents. Data was analysed through descriptive statistical methods such as means, standard deviation, frequencies and percentage. Inferential analyses were used in relation to correlation analysis and regression analysis to test the relationship between the four explanatory variables and the explained variable. Multiple regression models were used to show the relationship between the predicted variable and the predictor variables.

Results: The findings of the study indicated that delivery time responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness have a positive relationship with procurement performance among government ministries.

Conclusion: Based on the study findings, the study concludes that performance of government ministries can be improved by delivery time requirement responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness.

Policy recommendation: The study recommended that institutions should embrace vendor responsiveness measures so as to improve procurement performance and further researches should be carried out in other institutions to find out if the same results can be obtained.

Keywords: *delivery time requirement responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness.*

1.0 INTRODUCTION

1.1 Background of the Study

The business environment in which firms compete today is markedly different from that in past decades. Improvements in computational power coupled with the advent of the internet have decreased the coordination costs needed to successfully integrate disparate firms across the globe into a single supply chain (Klakegg & Williams, 2012). In the past, firms commonly contracted with a huge number of suppliers and currently there is a significant movement from the traditional adversarial buyer-seller relationships to the use of a few qualified suppliers with close relationships. This trend is attributed to the customers' demand for higher quality, wider range of products, shorter time to market and faster deliveries.

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 (Gianakis, 2012). According to Lazear (2010) procurement performance is considered to be the result of two elements: purchasing effectiveness and purchasing efficiency.

1.1.1 Global Perspective

One key aspect of managing the complex global supply chain is through strategic sourcing decisions. However, as the concept of strategic sourcing gains momentum many firms seeking to shift to this strategy have found themselves riddled with a supply base that does not support implementation as they have too many suppliers. Supplier responsiveness thus becomes a key to change from transactional to strategic purchasing (Awino & Wainaina, 2012).

1.1.2 Regional Perspective

In Africa, owing to the importance of public procurement, conference on public procurement has been constituted to look at issues of integrity and transparency in public procurement (James & Faizul, 2010). Similarly, scholars have developed interest on the subject of public procurement in the recent past conducting a number of studies on the subject. For instance, Liker and Choi (2015) wrote a book that focused on the law governing public procurement in a number of African systems and looks at key themes relevant to all African states to provide a focused view of the African systems and bring a comparative perspective in understanding public procurement in Africa and other parts of the world.

1.1.3 Local Perspective

Higher supplier responsiveness is emphatically identified with enhanced client fulfillment and upgraded procurement performance. Thus it is central that the exercises which can advertise better connections and thus better supplier responsiveness ought to be placed set up (Christopher & Peck, 2014). The concept of procurement performance has emerged strongly in the recent past in Kenyan Public sector (Wanyama, 2013). This is due to the malpractices and inefficiencies experienced in the sector in the past. Similarly, the public procurement functions in Kenya have been characterized with inadequate funding from the government.

1.1.4 Vendor Responsiveness

World over, 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 (Tukamuhabwa, 2012). 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. Supply responsiveness refers 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.

According to Mohan (2010) state agencies in UK, London, need to be responsive to customers' unique and rapidly changing needs so as to be sustainable. 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 (Malta, Schapper, Calvo-Gonzalez & Berroa, 2011).

1.2 Problem Statement

As the clock ticks, so does demand for better quality, faster delivery, and better value increase which according to OECD (2010) has led to the visionary leaders to start to differentiate between the things that create value and those that do not and thus leading to adoption of supply chain best practices such as vendor responsiveness metrics and value engineering that seek to help firms have a competitive advantage (World Bank, 2013).

Vendor responsiveness is important to any organization since it leads to improved design, quality and cost, which means an improvement in supply chain performance. A report by PPOA (2010) indicates that up to 30% of procurement inefficiencies in the public sector in Kenya are attributed to supplier's performance issues. There is therefore concern as to what can be done to reduce supplier related procurement issues. One of the ways through which organizations strive to reduce supplier related inefficiencies is through evaluation of suppliers.

A systems audit for State Law Office (SLO), 2012/2013 report revealed losses of Ksh 18 Million through irregular procurements in financial year (FY) 2012/2013. Earlier, in FY 2011/2012, SLO had lost Ksh 8.5 Million due to inefficiencies (Wanyama, 2013). This raises questions on the level of procurement performance of public institutions procurement system. The question arises in this case as to what criteria the state corporations should use in selecting vendors with the level of responsiveness required for better procurement performance.

Several studies have been undertaken on supplier selection and evaluation. Among the studies, Liker and Choi (2015) studied how important the selection and evaluation of vendors is in the management of purchasing and established that purchasing management has a significant bearing on the performance of organizations and their overall competitiveness. According to Agaba and Shipman (2010), negative procurement practices are manifested in shoddy commodities and goods, poor performance of construction works, failure to complete performance of contracts on time or not at all.

Cox (2014) conducted a study on vendor selection and sustainability and noted that vendor selection and evaluation still remains a challenge for most organizations and improvements are necessary. The studies found that the investigated firms looked at negotiating savings instead of focusing on streamlining the vendor responsiveness processes. This study was however, conducted in a developed country and not in Kenya. This research however did not focus on the relationship between vendor responsiveness and procurement performance. It is hence against this background that this study was undertaken with a main purpose of establishing the role of vendor responsiveness on procurement performance among government ministries in Kenya.

1.3 Objectives of the Study

1. To assess the role of delivery time requirement responsiveness on procurement performance among government ministries in Kenya.
2. To establish the role of technical requirement responsiveness on procurement performance among government ministries in Kenya.
3. To determine the role of financial requirement responsiveness on procurement performance among government ministries in Kenya.
4. To evaluate the role of specifications requirement responsiveness on procurement performance among government ministries in Kenya.

2.0 LITERATURE REVIEW

2.1.1 Delivery Time Requirement and Procurement Performance

The main strategy of time-based competition (TBC) is to use speed for competitive advantage. The company uses this strategy to deliver product or services faster than the competitors (CIPS, 2012). Time-based manufacturing has been proven to be a successful way of creating 'unfair' competitive advantage over competitors by companies like Wall Mart. Clemons et al., (2010) claim that time-based competitors can offer greater varieties of products and services, at lower costs and in less time than their more pedestrian competitors.

Lead-time has been shown to be an important factor for today's markets. Lead-time in product development and in delivering the product or service to the customer plays a significant role in competition. Thus, a number of researchers have been trying to point out the benefits that time-based competition can have on the bottom line. Evenett et al. (2014) argue that every quartering of time reduces costs as much as 20 percent.

2.1.2 Technical Requirement and Procurement Performance

According to Christopher et al (2014) in his study technical capability relates to engineering issues and the supplier's capability to meet performance and technical specifications and requirements. Activities related to the provision of technical support are fundamental to suppliers' performance. He argues that this technical support might consist of direct investment in equipment and personnel of the suppliers, evaluation of supplier performance and sharing feedback on the evaluation results, visiting suppliers' plants, and supplier certification.

Balogun (2013) argues that the buyer is not only concerned about the current plant technology utilized by the supplier but also about its future plant technological capability. This includes a suppliers' design capability as well as the speed with which it can take an item from the development stage into the production stage. Related to the assessment of future plant technological capabilities is an evaluation of a potential suppliers' ability to participate in, and contribute to, the design of the buying firms' new products. Similarly, the suppliers' ability to move fast, so that new products can be introduced more quickly, becomes an important asset for the buying organization. The ultimate purpose of providing technical support to suppliers is to reduce a buyer's transaction costs through improved supplier performance (Abouzeedan et al., 2012).

2.1.3. Financial Requirement and Procurement Performance

According to Kazakhstann *et al.*, (2010), supplier financial support is the buyers' effort towards its suppliers to continuously spot financial weaknesses within its supply base and taking the necessary financial support to avoid supply disruptions and increase supplier financial health so as to meet his short-term and long-term financial obligations. Financial support is a critical success factor in supplier development and supplier performance. According to Lazear (2010), proven financial support provides the buying firm with increased supplier competition in the global market and potentially reduces transportation and other logistical costs of suppliers. An assessment of the financial stability and fiscal outlook of the supplier is a factor gaining in importance in the growing trend of forging supplier-buyer partnerships (Hoole, 2015). Both buyers and sellers are looking for partners that are viable, ongoing concerns that will contribute to the relationship both for the present and in the future.

2.1.4 Specifications Requirement and Procurement Performance

Simatupang et al., (2014) defined specification compliance as a measure of how well the service level delivered meet customer expectations. A common definition of specification compliance is that service should correspond to the requirements. Despite rigorous academic debate and attention to issues related to understanding specification compliance from an external customer's perspective, research on the procurement needs domain is relatively new (Rogers, 2013). Paul et al., (2011) contends that specification is an integral part of the procurement function. Without specification the process can be filled with pitfalls and obstacles for the purchasing department. He lists the characteristics of a good specification as follows; identifies the minimum requirements of the end user, allows for a fair and open procurement process, provides for testing/inspection to insure the goods/services received meet the standard set forth in the specification and provides equitable award at the lowest possible cost (Mohan, 2010).

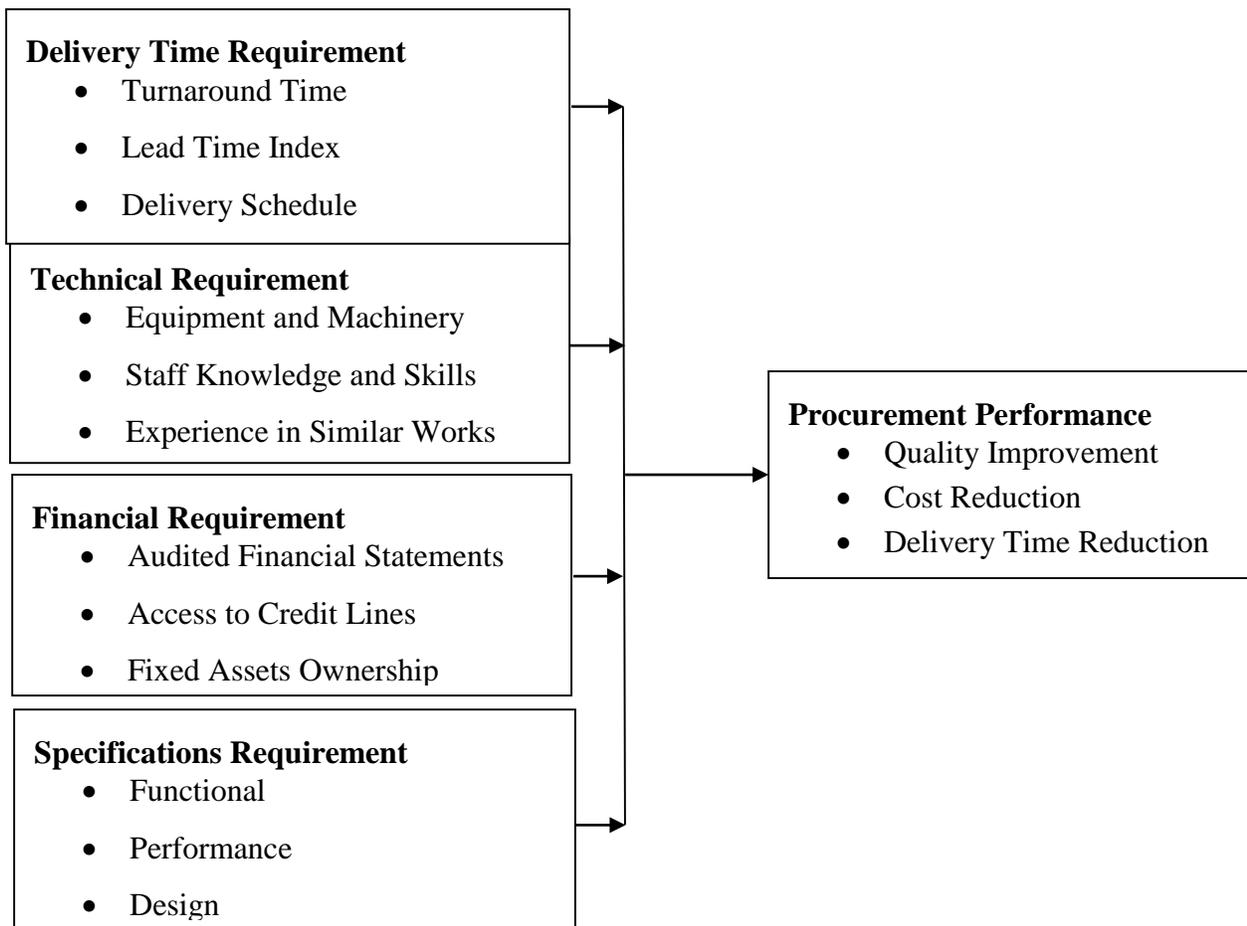
2.2 Theoretical review

2.2.1 Goal Setting Theory

Delivery time responsiveness is best explained by the Goal Theory which states that vendors are motivated by clear goals and appropriate feedback (Aitken, Childerhouse & Towill, 2012). That working towards a goal provides a major source of motivation. Challenging and specific goals accompanied by feedback lead to higher levels of vendor performance in terms of delivery. The prime axiom of this theory is that specific difficult goals lead to higher performance than when

vendors strive to simply do their best (Artley & Stroh, 2015). Such goals positively affect performance of an individual and direct people’s efforts and energies in a particular direction. That there was a relationship between how difficult and specific a goal was and peoples performance of a task. Difficult and specific delivery goals lead to better task performance than vague and easy goals. In their research, Belz and Wuensche (2013) found out that for goals to be motivational, they should have the following characteristics: They must be specific in terms of cycle and delivery time frame.

2.3 CONCEPTUAL FRAMEWORK



Independent Variables

Dependent Variable

3.0 METHODOLOGY

Descriptive research design was adopted. The study preferred this method because it allowed an in-depth study of the subject. The study used a sample size of 156 procurement staff. Census will be used in this study. Questionnaires were used to collect data. The questionnaires were tested for validity and reliability using 10% of the total sample respondents. Data was analyzed through descriptive statistical methods such as means, standard deviation, frequencies and percentage.

Inferential analyses were used in relation to correlation analysis and regression analysis to test the relationship between the four explanatory variables and the explained variable. Multiple regression models were used to show the relationship between the predicted variable and the predictor variables.

4. 0 RESULTS FINDINGS

4.1 Descriptive Statistics

The main objective of the study was to examine the role of vendor responsiveness on procurement performance among government ministries in Kenya. To this end, four variables were conceptualized as components of procurement performance among government ministries in Kenya. These include; delivery time requirement, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness.

4.1.1 Delivery Time Requirement

The first objective of the study was to assess the influence of delivery time requirement on procurement performance among government ministries in Kenya. The respondents were asked to indicate to what extent did delivery time requirement influence procurement performance among government ministries in Kenya. Results indicated that majority of the respondents 25% agreed that it was to a very great extent, 27% said that it was to a great extent, 35% said it was moderate, while little extent and not all were at 5 and 8% respectively.

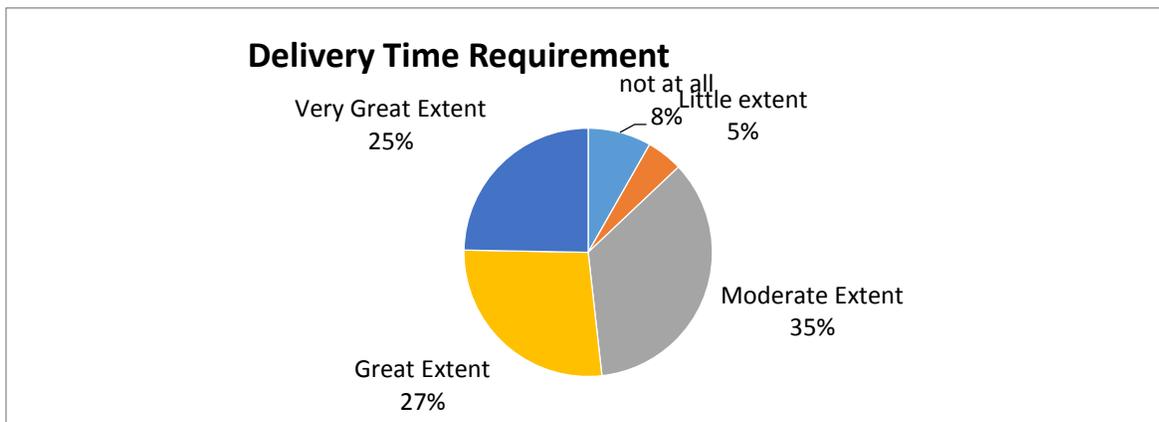


Figure: 2: Delivery Time Requirement

The respondents were also asked to comment on statements regarding delivery time requirement on procurement performance among government ministries in Kenya. The responses were rated on a likert scale and the results presented in Table 1 below. It was rated on a 5 point Likert scale ranging from; 1 = strongly disagree to 5 = strongly agree. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon. The score of 'neutral' has been taken to represent a statement agreed upon. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon. The respondents were asked to indicate their responses on delivery time requirement statements.

The results revealed that majority of the respondent with a mean of (4.0) agreed with the statement that turnaround time plays a great role in quality improvement. The measure of dispersion around the mean of the statements was 0.9 indicating the responses were varied. Further result revealed that majority of the respondents as indicated by a mean of (3.8) agreed with the statement lead time index plays a great role in quality improvement. The standard deviation for was 0.9 showing a variation in the responses. The result revealed that majority of the respondent (4.5) agreed with the statement that delivery schedule plays a great role in quality improvement. The results were varied as shown by a standard deviation of 0.5.

The average response for the statements on turnaround time plays a great role in cost reduction was (4.5). The results were varied as shown by a standard deviation of 0.6. The average response for the statements on lead time index plays a great role cost reduction was (4.5) .The results were varied as shown by a standard deviation of 0.5. The results revealed that majority of the respondent with a mean of (4.4) agreed with the statement that delivery schedule plays a great role in cost reduction. The measure of dispersion around the mean of the statements was 0.7 indicating the responses were varied.

The result revealed that majority of the respondent as indicated by a mean of (3.9) agreed with the statement turnaround time plays a great role in delivery time reduction. The standard deviation for was 0.8 showing a variation. The result revealed that majority of the respondent (4.4) agreed with the statement that lead time index plays a great role in delivery time reduction. The results were varied as shown by a standard deviation of 0.743. The average response for the statements on delivery schedule plays a great role in delivery time reduction was (4.5). The results were varied as shown by a standard deviation of 1.1. The findings agree with Mwenda (2012) that checking the delivery time requirement when sourcing for a new product or service is the way to go.

Table 1: Delivery Time Requirement

Statements	N	Mean	Std. Deviation
Turnaround time plays a great role in quality improvement	150	4.0	0.9
Lead time index plays a great role in quality improvement	150	3.8	0.9
Delivery schedule plays a great role in quality improvement	150	4.5	0.5
Turnaround time plays a great role in cost reduction	150	4.5	0.6
Lead time index plays a great role cost reduction	150	4.5	0.5
Delivery schedule plays a great role in cost reduction	150	4.4	0.7
Turnaround time plays a great role in delivery time reduction	150	3.9	0.8
Lead time index plays a great role in delivery time reduction	150	4.4	0.7
Delivery schedule plays a great role in delivery time reduction	150	4.5	1.1

4.1.2 Technical Requirement

The second objective of the study was to establish the influence of technical requirement responsiveness on procurement performance among government ministries in Kenya. The respondents were asked to indicate to what extent technical requirement responsiveness influence had on procurement performance among government ministries in Kenya. Results indicated that majority of the respondents 25% agreed that it was to a very great extent, 27% said that it was to a great extent, 35% said it was moderate, while little extent and not all were at 5 and 8% respectively.

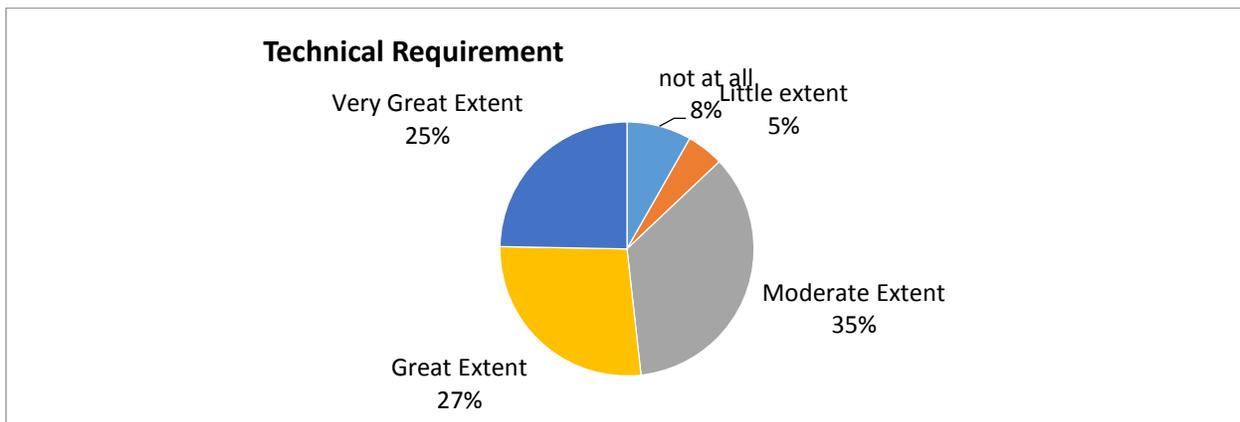


Figure 3: Technical Requirement

The respondents were also asked to comment on statements regarding technical requirement responsiveness influence on procurement performance among government ministries in Kenya. The results revealed that majority of the respondent with a mean of (4.07) agreed with the statement that equipment and machinery available plays a great role in quality improvement. The measure of dispersion around the mean of the statements was 0.808 indicating the responses were varied. The findings also revealed that majority of the respondent as indicated by a mean of (4.01) agreed with the statement staff knowledge and skills play a great role in quality improvement. The standard deviation for was 0.831 showing a variation. The result revealed that majority of the respondent (4.01) agreed with the statement experience in similar works play a great role in quality improvement. The results were varied as shown by a standard deviation of 0.831. The average response for the statements on equipment and machinery available play a great role in cost reduction was (4.51). The results were varied as shown by a standard deviation of 0.502. The response for the statements on staff knowledge and skills play a great role in cost reduction was (4.48). The results were varied as shown by a standard deviation of 0.501. The results revealed that majority of the respondent with a mean of (2.97) agreed with the statement experience in similar works play a great role in cost reduction. The measure of dispersion around the mean of the statements was 1.318 indicating the responses were varied. The findings revealed that majority of the respondent as indicated by a mean of (3.13) agreed with the statement equipment and machinery available play a great role in delivery time reduction. The standard deviation for was 1.358 showing a variation. Further the result revealed that majority of the respondent (3.61) agreed with the statement that staff knowledge and skills play a great role in delivery time reduction. The results were varied as shown by a standard deviation of 1.358.

The result revealed that majority of the respondent (3.55) agreed with the statement experience in similar works play a great role in delivery time reduction. The results were varied as shown by a standard deviation of 1.061. They agree with Cachon (2013) that organizations must look toward technical requirements. The opportunities for cost savings and competitive advantage can be enormous as the impact on margins and bottom line is considerable.

Table 2: Technical Requirement

Statements	N	Mean	Std. Deviation
Equipment and machinery available plays a great role in quality improvement	150	4.07	0.808
Staff knowledge and skills play a great role in quality improvement	150	4.01	0.831
Experience in similar works play a great role in quality improvement	150	4.01	0.831
Equipment and machinery available play a great role in cost reduction	150	4.51	0.502
Staff knowledge and skills play a great role in cost reduction	150	4.48	0.501
Experience in similar works play a great role in cost reduction	150	2.97	1.318
Equipment and machinery available play a great role in delivery time reduction	150	3.13	1.358
Staff knowledge and skills play a great role in delivery time reduction	150	3.61	1.134
Experience in similar works play a great role in delivery time reduction	150	3.55	1.061

4.1.3 Financial Requirement

There was also need to establish influence of financial requirement responsiveness on procurement performance among government ministries in Kenya as the third objective. Results indicated that majority of the respondents 47% agreed that it was to a very great extent, 45% said that it was to a great extent, 2% said it was moderate; little extent was 2% and not all at 4%.

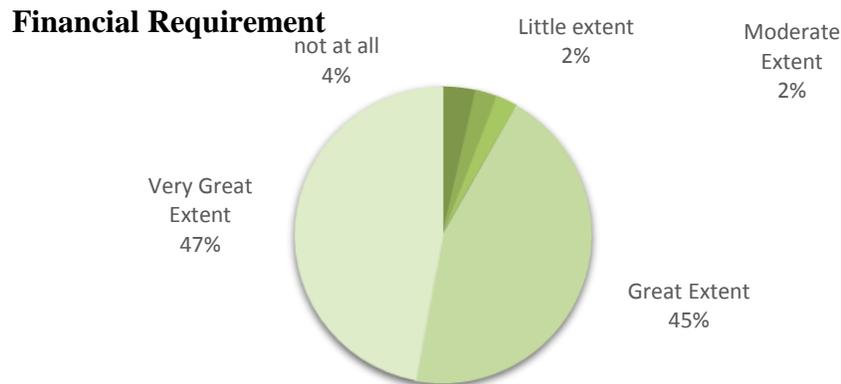


Figure 4: Financial Requirement

The respondents were asked to indicate their levels of agreement on statements regarding financial requirement responsiveness. The results below revealed that majority of the respondent with a mean of (3.9) agreed with the statements that audited financial statements play a great role in quality improvement. The measure of dispersion around the mean of the statements was 0.8 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (4.0) agreed with the statement access to credit lines play a great role in quality improvement. The standard deviation for was 0.8 showing a variation. The result revealed that majority of the respondent (4.0) agreed with the statement that fixed assets ownership plays a great role in quality improvement. The results were varied as shown by a standard deviation of 0.8.

The average response for the statements on audited financial statements played a great role in cost reduction had a mean of (3.94). The results were varied as shown by a standard deviation of 0.8. The average response for the statements on access to credit lines play a great role in cost reduction accounted for a mean of (4.0). The results were varied as shown by a standard deviation 0.8. The results revealed that majority of the respondent with a mean of (4.1) agreed with the statement fixed assets ownership plays a great role in cost reduction. The measure of dispersion around the mean of the statements was 0.822 indicating the responses were varied.

The result revealed that majority of the respondent as indicated by a mean of (3.1) agreed with the audited financial statements play a great role in delivery time reduction. The standard deviation for was 1.5 showing a variation. The result revealed that majority of the respondent (4.4) agreed with the statement that access to credit lines play a great role in delivery time reduction. The results were varied as shown by a standard deviation of 0.5. Finally the average response for the statements on fixed assets ownership plays a great role in delivery time reduction was (4.5). The results were varied as shown by a standard deviation of 0.5. These findings imply that through financial requirement ascertainment, ministries can improve competitive positioning, gain entry to new reliable vendors and supplement critical skills (Desouza, 2015).

Table 3: Financial Requirement

Statements	N	Mean	Std. Dev
Audited financial statements play a great role in quality improvement	150	3.9	0.8
Access to credit lines play a great role in quality improvement	150	4.0	0.8
Fixed assets ownership plays a great role in quality improvement	150	4.0	0.8
Audited financial statements play a great role in cost reduction	150	4.1	0.8
Access to credit lines play a great role in cost reduction	150	4.0	0.8
Fixed assets ownership plays a great role in cost reduction	150	4.1	0.8
Audited financial statements play a great role in delivery time reduction	150	3.1	1.5
Access to credit lines play a great role in delivery time reduction	150	4.4	0.5
Fixed assets ownership plays a great role in delivery time reduction	150	4.5	0.5

4.1.4 Specifications Requirement

There was also need to establish the influence of specifications requirement responsiveness on procurement performance among government ministries in Kenya. Results also showed that 3% of respondents indicated to very great extent, great extent was at 12%, moderate extent was 37%, while little extent was at 27% and not at all was at 21%.

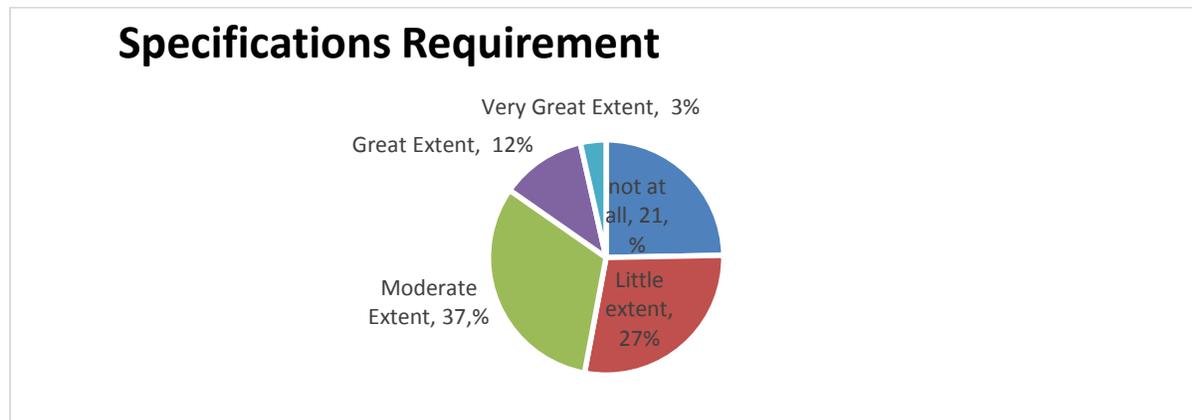


Figure 5: Specifications Requirement

The respondents were asked to indicate their views on specifications requirement responsiveness. The results revealed that majority of the respondent with a mean of (4.56) agreed with the statement that getting functional specifications right plays a great role in quality improvements. The measure of dispersion around the mean of the statements was 0.498 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (4.56) agreed with the statement getting performance specifications right plays a great role in quality improvement. The standard deviation for was 0.498 showing a variation. The result revealed that majority of the respondent (4.45) agreed with the statement that getting design specifications right plays a great role in quality improvement. The standard deviation for was 0.63 showing a variation.

The mean for this view was (4.36) the results were varied as shown by a standard deviation of 0.707. The average response for the statements on getting functional specifications right plays a great role in cost reduction scored mean of (4.53). The results were varied as shown by a standard deviation of 0.501. The average response for the statements on getting performance specifications right plays a great role in cost reduction was (4.44). The results were varied as shown by a standard deviation of 0.498.

The results below revealed that majority of the respondent with a mean of (4.41) agreed with the statement getting functional specifications right plays a great role in cost reduction. The measure of dispersion around the mean of the statements was 0.677 indicating the responses were varied. The result revealed that majority of the respondent as indicated by a mean of (4.51) agreed with the statement getting performance specifications right plays a great role in delivery time reduction. The standard deviation for was 0.501 showing a variation in responses. The result revealed that majority of the respondent (4.57) agreed with the statement that getting design specifications right plays a great role in delivery time reduction. The results were varied as shown by a standard deviation of 0.497. The results imply that an organization benefits greatly when specification requirements are embraced to reduce costs, introduce evaluation systems designed to address the organization's needs, and work with the organization to streamline sourcing (Abdifatah, 2012).

Table 4: Specifications Requirement

	N	Mea n	Std. Deviation
Getting functional specifications right plays a great role in quality improvement	150	4.56	0.498
Getting performance specifications right plays a great role in quality improvement	150	4.56	0.498
Getting design specifications right plays a great role in quality improvement	150	4.45	0.63
Getting functional specifications right plays a great role in cost reduction	150	4.36	0.707
Getting performance specifications right plays a great role in cost reduction	150	4.53	0.501
Getting design specifications right plays a great role in cost reduction	150	4.44	0.498
Getting functional specifications right plays a great role in delivery time reduction	150	4.41	0.677
Getting performance specifications right plays a great role in delivery time reduction	150	4.51	0.501
Getting design specifications right plays a great role in delivery time reduction	150	4.57	0.497

4.3 Correlation Analysis

Correlation analysis was used to determine both the significance and degree of association of the variables and also predict the level of variation in the dependent variable caused by the independent variables. The correlation summary shown in Table 5 indicates that the associations between each of the independent variables and the dependent variable were all significant at the 95% confidence level. The correlation analysis to determine the relationship between vendor responsiveness and procurement performance among government ministries in Kenya, Pearson correlation coefficient computed and tested at 5% significance level.

The results indicate that there is a positive relationship ($r=0.806$) between delivery time requirement and procurement performance among government ministries. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$). The correlation analysis to determine the relationship between technical requirements and procurement performance among government ministries, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there is a positive relationship ($r=0.684$) between technical requirements and procurement performance among government ministries. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$).

The correlation analysis to determine the relationship between financial requirements and procurement performance among government ministries, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there is a positive relationship ($r=0.680$) between of financial requirements and procurement performance among government ministries. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$).

The correlation analysis to determine the relationship between specifications requirements Issues and procurement performance among government ministries, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there is a positive relationship ($r=0.696$) between specifications requirements and procurement performance among government ministries. In addition, the researcher found the relationship to be statistically significant at 5% level ($p=0.000, <0.05$). Hence, it is evident that all the independent variables could explain the changes in role of vendor responsiveness affecting procurement performance among government ministries in Kenya, on the basis of the correlation analysis.

Table 5: Summary of Pearson's Correlations

Correlations			Delivery Time Requirement	Technical Requirement	Financial Requirement	Specifications Requirement	Procurement Performance
Delivery Time Requirement	Pearson Correlation	1					
	Sig. (2-tailed)	0					
	N	150					
Technical Requirement	Pearson Correlation	.598**	1				
	Sig.(2-tailed)	0					
	N	150	150				
Financial Requirement	Pearson Correlation	.589**	.469**	1			
	Sig.(2-tailed)	0	0				
	N	150	150	150			
Specifications Requirement	Pearson Correlation	.588**	.780**	.532**	1		
	Sig.(2-tailed)	0	0	0			
	N	150	150	150	150		
Procurement Performance	Pearson Correlation	.806**	.684**	.680**	.696**	1	
	Sig.(2-tailed)	0	0	0	0		
	N	150	150	150	150	150	150

** Correlation is Significant at the 0.05 Level (2-Tailed).

- a) Predictors: (Constant), Delivery Time Requirement Responsiveness, Technical Requirement Responsiveness, Financial Requirement Responsiveness and Specifications Requirement Responsiveness
- b) Dependent Variable: Procurement Performance

4.4 Regression Analysis

In this study multivariate regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variables pooled together. Regression analysis was conducted to find the proportion in the dependent variable (procurement performance among government ministries in Kenya) which can be predicted from the independent variables (delivery time requirement, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness).

Table 6 presents the regression coefficient of independent variables against dependent variable. The results of regression analysis revealed there is a significant positive relationship between dependent variable and the independent variable. The independent variables reported R value of .876 indicating that there is perfect relationship between dependent variable and independent variables. R square value of 0.768 means that 76.8% of the corresponding variation in procurement performance among government ministries in Kenya can be explained or predicted by (delivery time requirement, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness) which indicated that the model fitted the study data.

Adjusted R square is called the coefficient of determination which indicates how procurement performance among government ministries in Kenya varied with variation in effects of factors which includes; delivery time requirement, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness. The results of regression analysis revealed that there was a significant positive relationship between dependent variable and independent variable at ($\beta = 0.768$), $p=0.000 < 0.05$).

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.876 ^a	.768	.762	.112

- c) Predictors: (Constant), Delivery Time Requirement Responsiveness, Technical Requirement Responsiveness, Financial Requirement Responsiveness and Specifications Requirement Responsiveness
- d) Dependent Variable: Procurement Performance

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.329	4	1.582	121.692	.000 ^b
	Residual	1.913	145	0.013		
	Total	8.243	149			

a) **Predictors: (Constant), Delivery Time Requirement Responsiveness, Technical Requirement Responsiveness, Financial Requirement Responsiveness and Specifications Requirement Responsiveness**

b) **Dependent Variable: Procurement Performance**

The significance value is 0.000 which is less than 0.05 thus the model is statistically significance in predicting how delivery time requirement responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness influence procurement performance among government ministries. The F critical at 5% level of significance was 76.5. Since F calculated which can be noted from the ANOVA table above is 121.692 which is greater than the F critical (value= 76.5), this shows that the overall model was significant. The study therefore establishes that; delivery time requirement responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness influence procurement performance among government ministries. These results agree with Kakwezi and Nyeko (2010) results which discussed procurement vendor evaluation processes and procurement performance.

Table 8: Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.817	0.229		3.576	0.000
	Delivery Time Requirement	0.537	0.064	0.472	8.439	0.000
	Technical Requirement	0.097	0.041	0.159	2.391	0.020
	Specifications Requirement	0.080	0.032	0.168	2.49	0.010
	Financial Requirement	0.067	0.015	0.237	4.597	0.000

a) **Predictors: (Constant), Delivery Time Requirement Responsiveness, Technical Requirement Responsiveness, Financial Requirement Responsiveness and Specifications Requirement Responsiveness**

b) **Dependent Variable: Procurement Performance**

The research used a multiple regression model

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where Y= Procurement Performance,

B₀= Constant

X₁= Delivery Time Requirement Responsiveness

X₂= Technical Requirement Responsiveness

X₃= Financial Requirement Responsiveness

X₄= Specifications Requirement Responsiveness

ε= Error Term At 95% Confidence Level.

The regression equation will be;

$$Y = 0.817 + 0.537X_1 + 0.097X_2 + 0.08X_3 + 0.067X_4$$

The regression equation above has established that taking all factors into account (delivery time requirement, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness) constant at zero, procurement performance among government ministries will be an index of 0.817.

The findings presented also shows that taking all other independent variables at zero, a unit increase in delivery time requirement will lead to a 0.537 increase in procurement performance among government ministries. The P-value was 0.000 which is less 0.05 and thus the relationship was significant. The study also found that a unit increase in technical requirement will lead to a 0.097 increase in in procurement performance among government ministries. The P-value was 0.02 and thus the relationship was significant.

In addition, the study found that a unit increase in financial requirement will lead to a 0.067 increase in the procurement performance among government ministries. The P-value was 0.000 and thus the relationship was significant. Lastly, the study found that specifications requirement will lead to a 0.08 increase in the procurement performance among government ministries in Kenya. The P-value was 0.01 and hence the relationship was significant since the p-value was lower than 0.05. The findings of the study show that, delivery time contributed most to the procurement performance among government ministries in Kenya.

5. 0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

5.1.1 Delivery Time Requirement

Lead time indexing and observing delivery schedule were common in the ministry. Correlation and regression results revealed that this was an important variable that could perhaps be explained by the observation from the findings that delivery time requirement responsiveness was an important factor in influencing procurement performance of government ministries.

5.1.2 Technical Requirement

A majority of respondents were found to highly agree that the ministry had embraced technical requirement responsiveness with regard to its procurement activities. Ascertaining staff knowledge and experience in similar works were common in the ministry. Correlation and regression results revealed that this was the second most important variable that could perhaps be explained by the observation from the findings that technical requirement responsiveness was an important factor in influencing procurement performance of government ministries.

5.2.3 Financial Requirement

A majority of respondents were found to highly agree that the ministry had embraced financial requirement responsiveness with regard to its procurement activities. Checking for audited financial statements and access to credit lines was common in the ministry. Correlation and regression results revealed that this was the third most important variable that could perhaps be explained by the observation from the findings that financial requirement responsiveness was an important factor in influencing procurement performance of government ministries.

5.2.4 Specifications Requirement

A majority of respondents were found to highly agree that the ministry had embraced specifications requirement responsiveness with regard to its procurement activities. Checking for functional and performance specifications was common in the ministry. Correlation and regression results revealed that this was an important variable that could perhaps be explained by the observation from the findings that specifications requirement responsiveness was an important factor in influencing procurement performance of government ministries.

5.2.5 Procurement Performance

The regression results revealed that vendor responsiveness issues identified in the study, that is, delivery time requirement responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness combined could explain approximately 76.8% of the variations in the procurement performance. The other 23.2% may be attributed to other strategies not explained by the model or the variables.

5.3 Conclusion of the Study

Based on the study findings, the study concludes that performance of government ministries can be improved by delivery time requirement responsiveness, technical requirement responsiveness, financial requirement responsiveness and specifications requirement responsiveness.

5.4 Recommendations of the Study.

The study recommends that procurement staff in the ministry should ensure that they strictly follow procurement procedures to ensure that goods supplied are of the right quality, in the right quantity, at the right time, to the right place from the right source. This will aim at satisfaction of customers in terms of cost, quality, and timeliness of the delivered product or service, minimizing administrative operating costs, conducting business with integrity, fairness and openness. More checks and controls should be introduced to check on the integrity of the sourcing systems.

5.5 Recommendations for Further Studies

Existing literature indicates that as a future avenue of research, there is need to undertake similar research in other institutions and public sector organizations in Kenya and other countries in order to establish whether the explored vendor responsiveness aspects herein can be generalized to affect procurement performance in other public institutions.

REFERENCES

- Abouzeedan, A., & Busler, M. (2012). *Information technology (IT) Impact on Performance of Small and Medium-size Enterprises (SMEs)* 16th Work Shop. Barcelona, Spain, 2(1), 22-28.
- Agaba, E., & Shipman, N. (2010). *Public Procurement Reform in Developing Countries: The Ugandan Experience*. Boca Raton, FL: Pr Academics Press.
- Aitken, J., Childerhouse, P., & Towill, D. (2012). The impact of product life cycle on supply chain strategy. *International Journal of Production Economics*, 5(2), 127–140.
- Akech, J.M. (2014). *Development partners and governance of public procurement in Kenya: enhancing democracy in the administration of aid*. *Int. law Politics*, 37(4), 829-868.
- Al Awad, M. (2010). “*The role of manufacturing in promoting sustainable economic growth in the GCC*”, Working paper, Institute for Social & Economic Research (ISER), Zayed University, Knowledge Village, Dubai.
- Alsaaty, M., & Sawyer, G. (2012). “The competitive advantage of the United States versus China in the Gulf Cooperation Council (GCC) Countries”, *Journal of International Business Research*, 11(1), 121-131.
- Amayi, F.K. (2011). *Factors Affecting Procurement in the Public Service: a Case Study of the State Law Office*. Eldoret: Moi University.
- Andreasen, P. (2012). *The Dynamics of Procurement Management: A Complexity Approach*. Frederiksberg: Copenhagen Business School [Phd].
- Armstrong, M., & Baron, A. (2014). *Managing performance: performance management in action*. London: Chartered Institute of Personnel and Development.
- Artley, W., & Stroh, S. (2015). *The Performance-Based Management Handbook: A Six- Volume Compilation of Techniques and Tools for Implementing the Government Performance and Results Act*, 9(3), 2-15.
- Awino, B., & Wainaina, G. (2012). “*An empirical investigation of supply chain management practices in large private manufacturing firms in Kenya*” unpublished PhD thesis. University of Nairobi.
- Baldry, D., & Amaratunga, D. (2012). *Performance Measurement in Facilities Management and its Relationships with Management Theory and Motivation*, *Facilities*, 20(10), 327-336.
- Balogun, M.J. (2013). *Performance Management and Agency Governance for Africa Development: The search for common cause on Excellence in the Public Service*. UNCEA, Addis Ababa.
- Basheka, C., & Bisangabasaija, E. (2010). Determinants of unethical public procurement in local government systems of Uganda: a case study. *International Journal of Procurement Managements*, 3(1), 91-104.
- Belz, C., & Wuensche, M. (2013). “*Classification of performance contracting solutions: a managerial typology*”, paper presented at the 2nd International Conference on Business Market Management.
- Cachon, G. (2013). *Supply chain coordination with contracts*. Handbooks in Operations Research and Management Science: Supply Chain Management. North Holland, Amsterdam, 8(9), 229–339.
- Carayannis, E.G., & Popescu, D. (2012). *Profiling a Methodology for Economic Growth and Convergence: Learning from the EU e-Procurement Experience for Central and Eastern European Countries*, 25(1), 1-14.

- Cheung, C.F., Wang, W.M., & Lo, V. (2014). *An agent oriented and knowledge based system for strategic e-procurement*. *Expert Systems*, 1(1), 11-19.
- Choi, T.Y., & Krause, D. (2012). "The supply base and its complexity: Implications for transaction costs, risks, responsiveness, and innovation". *Journal of Operations Management*, 2(4), 637-652.
- Chris, M., & Adam, D. (2015). "Using SPC to measure a national supermarket chain's suppliers' performance", *International Journal of Operations & Production Management*, 27(8), 874–900.
- CIPS (2012). How do we measure up? *An Introduction to Performance Measurement of the Procurement Profession*. Retrieved September 17, 2017, from Chartered Institute of Purchasing and Supply.
- Clemons, E.K., Reddi, S.P., & Row, M.C. (2010). "The Impact of Information Technology on the Organization of Economic Activity: The Move to the Middle Hypothesis," *Journal of Management Information Systems*, 10(2), 9-35.
- Cousins, P., & Speckman, R. (2015). Strategic supply and the management of inter- and intra-organizational relationships, *Journal of Physical Distribution & Logistics Management*, 9(1), 19-29.
- Cox, A. (2014). Understanding buyer and supplier power: a framework for procurement and supply competence. *The Journal of Supply Chain Management*, 7(2), 8-15.
- Danese, P., Romano, P., & Formentini, M. (2013). *The Impact of Supply Chain Integration on Responsiveness: The Moderating Effect of using an International Supplier Network*. *Transportation Research*, 9(1), 125–140.
- Dean, M., & Kiu, C. (2012). "Performance monitoring and quality outcomes in contracted services", *International Journal of Quality & Reliability Management*, 19(4), 396-413.
- Desouza, K.C. (2015). The neglected dimension in strategic sourcing: security, Strategic outsourcing: *An international journal*, 1(3), 288-292.
- Dorward, A. (2010). "The effects of transaction costs, power and risk on contractual arrangements: a conceptual framework for quantitative analysis", *Journal of Agricultural Economics*, 5(2), 59-73.
- Dyer, J.H., & Nobeoka, K. (2011). "Creating and managing a high-performance knowledge- sharing network: the Toyota case", *Strategic Management Journal*, 21(3), 345-367.
- Edler, J., & Georghiou, L. (2010). *Public procurement and innovation*. Resurrecting the demand side, *Research Policy*, 3(6), 949-963.
- Evenett, S.J., & Hoekman, B.M. (2014). *International disciplines on government procurement: a review of economic analyses and their implications*, Centre for Economic Policy Research, 4(3), 24-38.
- Fisher, M.L., & McClelland, A.S. (2010). "Rocket Science Retailing is Almost Here: Are You Ready?" *Harvard Business Review Journal*, 8(4), 115-124.
- Gianakis, G. (2012). "The promise of public sector performance measurement: anodyne or placebo?" *Public Administration Quarterly*, 2(6), 34-64.
- Golafshani, N. (2014). *Understanding Reliability and Validity in Qualitative Research*, *The Qualitative Report*, 8(4), 597-607.

- Greiling, D. (2011). Performance measurement: a remedy for increasing the efficiency of Public services. *International Journal of Productivity and Performance Management*, 55(6), 448-465.
- Handfield, B., & Bechtel, C. (2012). The role of trust and relationship structure in improving supply chain responsiveness. *Journal of Industrial Marketing Management*, 31(4), 367-382.
- Harrison, A., & Hoek, R. (2011). *Logistics management and strategy: competing through the supply chain*. [rev.] ed. Harlow: Pearson/Financial Times Prentice Hall.
- Heinrich, C.J. (2012). *Outcomes-based performance management in the public sector: Implications for government accountability and effectiveness*. *Public Administration Rev.* 62(6), 712–725.
- Holweg, M. (2014). "An Investigation into Supplier Responsiveness". *International Journal of Logistics Management*, 6(1), 96-119.
- Hoole, R. (2015). *Five ways to simplify your supply chain*, Emerald.
- Humphreys, P., Li, W., & Chan, L. (2014). The impact of supplier development on buyer-supplier performance, *The International Journal of Management Science*, 3(2), 131-143.
- James, H., & Faizul, H. (2010). From arms-length to collaborative relationships in the supply chain: An evolutionary process. *International Journal of Physical Distribution & Logistics Management*, 3(9), 750-764.
- Joash, M., & Peterson, M. (2012). Synergies in African business and management practices. *International Journal of Physical Distribution & Logistics Management*, 7(1), 39-52.
- Johnson, R.B., & Onwuegbuzie, A.J. (2015). *Mixed Methods Research: A Research Paradigm Whose Time Has Come*, *Educational Researcher*, 3(7), 14-26.
- Kakwezi, P., & Nyeko, S. (2010). *Procurement Processes and Performance: Efficiency and Effectiveness of the Procurement Function*: Makerere University Press, Kampala.
- Kannan, V.R., & Tan, K.C. (2015). Buyer-supplier relationships, The impact of supplier selection and buyer-supplier engagement on relationship and firm performance. *International Journal of Physical Distribution & Logistics Management*, 36(10), 755-786.
- Kasomo, D. (2014). *Research Methods in Humanities and Education*, Eldoret; Zapf Chancery.
- Kazakhstan, R., & Jakob, S. (2010). *Survey Tools for Assessing Performance in Service Delivery*. In *The Impact of Economic Policies on Poverty and Income Distribution: Evaluation Techniques and Tools*, edited by François.
- Klakegg, O.J., & Williams, T. (2012). "Governance frameworks for public project development and estimation." *Project Management Journal*, 3(2), 27-42.
- Kombo, D., & Tromp, D. (2010). *Proposal and Thesis Writing, an introduction*. Nairobi: Pauline Publications Africa.
- Kothari, C.R. (2014). *Research methodology: Methods and Techniques*. 2Ed, New Age.
- Kumar, R., & Markeset, T. (2014). "Development of performance-based service strategies for the oil and gas industry: a case study", *Journal of Business & Industrial Marketing*, 2(2), 4-18.
- Kusek, J., & Rist, C. (2014). *Ten Steps to a Results-based Monitoring and Evaluation System: A Handbook for project managers*. World Bank Publications.
- Larry, H. (2013). *Advanced Statistics in Research: Reading, Understanding, and Writing Up Data Analysis Results*. Publisher: Shadow Finch Media LLC.
- Lazear, E.P. (2010). *Performance pay and productivity*. *American Economic Review*, 90(5), 1346–1361.

- Liker, J., & Choi, T. (2015). *Building deep supplier relationships*. Harvard business review on supply chain management.
- Malta, V., Schapper, R., Calvo-Gonzalez, O., & Berroa, D. (2011). *Old Rules, New realities: Are existing public procurement systems addressing current and future needs?* Washington, D.C.: The World Bank.