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## ADOPTION OF SUPPLY CHAIN DRIVERS ON SUSTAINABLE PERFORMANCE OF CONSTITUENCY DEVELOPMENT FUNDED PROJECTS IN THE COUNTY GOVERNMENT OF BUNGOMA

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IN THE COUNTY GOVERNMENT OF BUNGOMA**

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**Abstract**

**Purpose:** The focus of the study was to analyze the influence of supply chain drivers on performance of National Government Constituency Development funded projects in Bungoma County.

**Methodology:** Based on pragmatic worldview the study employed descriptive research design. The target population of the study consisted of five prequalified accredited service providers' contractors in Bungoma County with a total composition of 293 staff from which a sample size of 169 was drawn from the entire population. The data collection tool was the questionnaire which was subjected to pre testing through piloting before actual data collection. The data was analyzed descriptively and inferentially with the aid of SPSS tool and presented by use of tables. Correlation analysis was performed to establish the relationship between variables and multiple regressions to determine the cause effect of the variables.

**Findings:** Result of multiple regressions revealed that supply chain drivers jointly and independently influence performance of NGCDF funded projects in Bungoma County, Kenya. The study findings showed that all study variables (ICT  $\beta=0.136$ ,  $p<0.05$ , material management  $\beta=0.140$ ,  $p<0.05$ , supplier selection  $\beta=0.317$ ,  $p<0.05$  and contract  $\beta=0.280$ ,  $p<0.05$  were significant to performance of NGCDF funded projects in Bungoma county. Therefore the study concluded that supply chain practices of ICT, material flow, supplier selection and contractual capacity affects the performance of funded projects.

**Unique contribution to theory, practice and policy:** The study recommends that the county government management in Kenya need to invest in constant training of their employees on effective supply chain practices to enhance their performance and appropriate measures put in place that ensure that potential risks regarding contract management and detected in advance and mitigated to enhance operational performance.

**Keywords:** *Supply Chain, Supply Chain Management, Projects and Performance*

## 1.0 INTRODUCTION

Universally, a project is a deal that entails a current or future outlay of funds in the expectation of a stream of benefits extending far into the future (Gupta, 2017). National Government Constituency Development Fund (NG-CDF) project is a communal venture where such an investment involves the use of public funds by a Government body which has been given the obligation to mandated to execute certain exclusive assignments with the aim of accomplishing exclusive goals for the good of the greater public majority. NG-CDF projects purpose to issues of regional imbalances resulting from by benefaction politics by eradicating destitute through execution of local development projects; especially ones which result in provision of basic needs such as education, healthcare, water, agricultural services, security and electricity (Brigham *et al.*, 2016).

Performance of constituency development funded projects relate to factors such as design reliability, artistic look of the building, labour in addition to other factors put into consideration (Trevor *et al.*, 2013). Procurement approaches on the other hand have direct impact on the performance of the project in that the procedures utilized in opting for a contractor influences the outcome of a project. Appropriate supply chain drivers applied is one which aims at lowering the cost of the tender, it might lead to an increase in the risk of cost overrun on the assignment, due to high cost of variation orders (Daniel & Ali, 2014). Also, caution should be taken when selecting contractor in order to lower cost growths.

Performance of constituency development funded projects relays on the process of actualizing the investment plan by putting certain specific actions and structures in place in order to operationalize the investment dream and subsequently derive the targeted benefits from the project (Trevor *et al.*, 2013). Projects characteristics are factors such as project type, size, cost, degree of flexibility, complexity, time constraints, payment method, finding methods and innovative technology. Moreover, external environment aspects need to be put into consideration, together with the nature of the market, government policies, government as the main client, regulating feasibility, technology feasibility amongst other variables (Karimi & Namusonge, 2014).

Materials Management is a tool to optimize performance in meeting customer service requirements at the same time adding to profitability by minimizing costs and making the best use of available resources. The basic objective of Materials Management as explained by Banjoko (2000) and Jacobs et al (2009), is to ensure that the right item is bought and made available to the manufacturing operations at the right time, at the right place and at the lowest possible cost. According to wild (1995), materials management is

a concept which brings together the responsibility for determining the manufacturing requirement that is scheduling the manufacturing processes and procuring, storing and dispensing materials (Ondiek,2009). An integrated approach to material management defines it as the function responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide a predetermined service to the customer at a minimum cost.

Proximity to customers as well as proximity to both the raw materials and the supplier played an effective role in relocating to Jordan (Cao *et al.*, 2017). Alongside labour the availability of local labour in Jordan, with the significant difference in the paid labour wages between Jordan and Kuwait. Quality-of-life issues: In terms of education Jordan is one of the highest ranked countries in the region, this attracts labour and their families. As per the healthcare, Jordan exploits quite advanced technologies, along with health insurance programmes and policies to provide a unique healthcare. Materials are the lifeblood and heart of any manufacturing system and no organization can operate without them. They must be made available at the right price at the right quantity in the right quality in the right place.

Materials should be monitored right from the raw stage all the way up to the finished stage if at all customers are to get the product in the required time and standard (Akter and Uddin, 2017). Moreover, when material flow is not monitored, inventories accumulate unnecessarily thereby delaying consumer demand. The concept of materials management brings in the total systems approach to managing the entire flow of information, materials and services from raw materials suppliers through factories and warehouses to the end user/customer (Bolton, 2008). The firm's success depends on how they manage their materials effectively. They indicate that it is important to monitor inventory at each stage because it ties up resources. Therefore, effective materials management is fundamental to the survival of business, industry and economy.

Government projects reportedly are characterized with a high level of consumption of resources which contributes to significant amounts of waste which does not create value addition to firms (Srivastava, 2007). Despite the benefits attributed to the adoption of the Green Procurement, Kenya has performed poorly in adapting policy driven and structured methods that enhance the technology. It is argued that the review of the public procurement and disposal Acts of 2005, 2006 and 2009, and the current Public Procurement and Assets disposal ACT 2015 fail to adequately refer to the Green Public Procurement (Chemeres, Kimutai & Kibet, 2015). Material flow also referred to as inventory management is identified as a key element of effective and efficient supply chain.

## **1.2 Statement of the problem**

Sustainable organizations have the responsibilities of providing sufficient and quality service to the community in timely manner. Ventures facilitated by public funds purpose to accomplish specific goals of the organization placed by public sector organizations in a bid to aim at achieving certain organizational objectives set by public sector organizations to catalyze fulfillment of their mission. Sometimes, such goals fail to be accomplished (Bryson, 2018). Among the challenges facing poor quality constructions of constituency development funded projects in Bungoma County is reflected to be incompetent procurement procedures that derail effective construction process. Poor tendering procedures that include absence of know-how in preparation of tendering papers, or not knowing the amount as well as type of knowledge required for their completion is the key cause of poor-quality projects (Klakegg *et al.*, 2016). The procurement requirements in the county government are not clear and they ought to be made unambiguous enough so as not to confuse the stakeholders. There are challenges being faced in the procurement processes and affects the performance of the process in the county to a great extent. The county governments is faced with political forces interference, unethical practices, lack of technical expertise, corruption levels and dishonesty are challenges being faced by the county government. (Kerzner, 2017). The primary argument for constituency development funding of projects is that it improves the course as well as the pace of advancement by providing social and economic services. Constituency development funding projects have been perceived as weak since it produces a government-dependent culture. Tendering for advancement ought to mean improving the capability to overcome challenges and meet its needs. Based on the reviewed literature of the study, it was found that there is need for further research to be done on the impacts that tendering procedures have on quality of NG-CDF funded projects.

### **1.2.1 Specific Objectives**

The study was anchored on the following specific objective.

- i. To analyze the influence of material management on sustainable performance of Constituency Development Funded projects in County government of Bungoma.

## **1.4 Hypotheses of the Study**

Research hypothesis was adopted in line with the stated specific objectives as follows;

**H<sub>01</sub>:** Material flow management has no significant influence sustainable performance of Constituency Development Funded Projects in county government of Bungoma

## **2.0 THEORETICAL REVIEW**

### **2.1 The Resource–Based View Theory**

Underpinning supply chain management on the RBV theory is based on the understanding that within a supply chain, both intangible and tangible resources exist distinctly. Consequently, there is need to examine the value, rarity, imitability and non-substitutability (VRIN) of resources within a supply chain with a view to assessing their worth in sustaining competitive advantage (Barney & Peteraf as cited in Abusankha, 2014). Although several models have been advanced to explain competitive advantage, the one advanced by Barney in 1991 (as cited by Abushaikha, 2014) remains popular in that it explains the direct effects between the resources a firm has and sustenance of competitive advantage. Under this model, and viewed from a supply chain perspective, resources within a chain ought to be valuable, rare, imitable and non-substitutable (VRIN).

Barney argues that valuable resources are those that make a firm to improve its performance by allowing it to develop realizable strategies. Analogously, valuable resources enable a supply chain to achieve its aim of meeting the customer's requirements. On the basis of assertions by Barney that resources ought to be non-substitutable if they have to sustain competitive advantage (cited in Abushaikha, 2014), a supply chain should be set in a way that competing firms are not able to access alternative equivalent chains that provide potential competition. The concepts in this theory fit in this study as it brings understanding of the innovation process. The assimilation of e tendering initiatives by an entity is entirely an issue of technology diffusion and the adoption of procurement innovation. When an organization identifies the materials which will provide it with competitive advantage the organization is sure to fulfill its objectives, satisfy and even delight customers and this will result to growth of that organization since the firm will also care for those talents by ensuring that there is no way they could be taken away.

The theory also stresses the need to control materials and protect them from competitors. Nurturing will help improve the capabilities of the talents and even enable them exceed their performance and the outcome of this will be high productivity and growth of the organization (Armstrong & Shimizu, 2010). Resource-based view of materials includes the control of materials as an independent resource capable of creating competitive advantage for the organization such as through employee commitment. The theory is that each organization strives to create their own independent management of materials that are different and individualized, in order to add to the competitive advantages of the

organization.

### **2.2.1 Empirical Review of study Variable**

#### **Material Flow Management and Sustainable Performance**

Lwiki, (2013) conducted a study on the impact of inventory management practices on financial performance of sugar manufacturing firms in Kenya. The study aimed at finding out influence of inventory management of the performance of sugar mills. The study adopted questionnaire and interview schedules. The researcher used a sample of 50 respondents. Researcher utilized purposive sampling technique. The study analysed the data using both descriptive and inferential statistics to analyses the data. The study found out that in line with implementing inventory management practices; businesses have shifted to centralizing. The study concluded that proper management of inventory leads to better service delivery. However, the study did not capture any theory that underpinned the study.

Eroglu and Hofer (2011) studied the effect of lean and inventory management firm's performance in US manufacturing sector. The study objective was to determine the lean and inventory management practices on performance of the firms. Questionnaires was developed for the study. Analysis of data was done using bothe descriptive and inferential statistics. Data was presented in form of frequency tables; averages were determined and testsof hypothesis like ANOVA and correlation analysis were done. In lean production practice, inventory is considered to be a type of waste which should be reduced is seen to be equivalent to quality inventory management. The study concluded that inventory management plays a crucial role in the performance of the organization. Similar study can be done in other sectors of the economy.

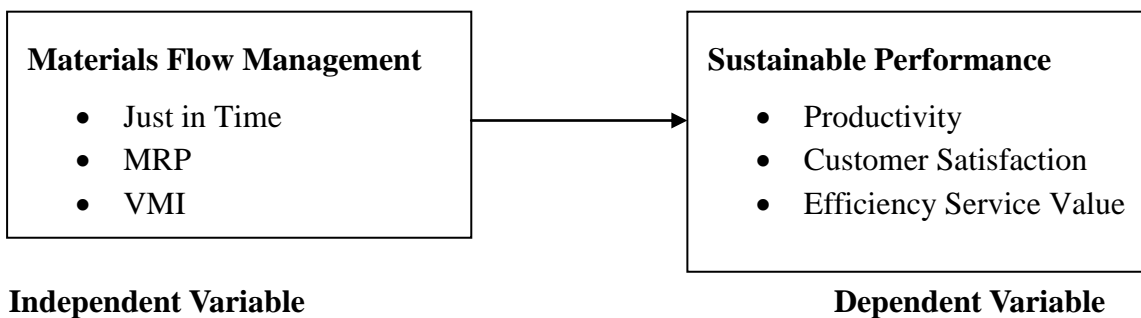
Gakinya (2013) conducted a study on inventory management and supply chain in Kenya. The study utilized agency theory and Kaizen theory. Data was collected by use of primary sources. The questionnaire for the study was semi structured containing open and closed ended questions. The study uses descriptive research design. The study used purposive sampling technique in establishing the sample size. Researcher used descriptive statistics ie the mean and standard deviation in analyzing the results. The study found out that procurement operational systems as operated by most corporate organizations are the centralized, decentralized and the hybrid.. Procurement centralization is utilized as a tool of achieving benefits in the Procurement process. However, the research relied on descriptive statistics alone. Hence need to further analyse the results using inferential analysis.

Pauline, Wanyoike and Richu (2014) did a study on the assessment of the Role of

Materials Management on Organizational Performance- A case of new Kenya Cooperative Creameries limited, Eldoret Kenya. A cross sectional survey design was used in the study. Primary data was collected using interview schedules and secondary data was generated from records, books, journals, published and unpublished research materials. Data was analyzed using SPSS. The study findings indicated that supplier selection should be done by experts who are knowledgeable and have expertise to conduct the exercise professionally since supplier selection is a process vulnerable to personal and political interference especially in the public sector. A critique of the study is the limited scope of the study to only manufacturing firms in Kenya. This may not be the same case to suppliers from other countries in Africa and the rest of the world.

### 2.3 Conceptual Framework

An extensive review of literature identifies the potential that procurement performance has on proactive management of resources and by consequence the ability to remain competitive in terms of innovation and product quality (Kotabe & Mudambi, 2009). Consequently, it is postulated that procurement performance can be measured using the balanced score card for which efficiency and effectiveness should be primal.



**Figure 1:** Conceptual Framework

### 3.0 METHODOLOGY

Research design refers to the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in the procedure (Kothari, 2013). Basing on the pragmatic worldview, the study adopted descriptive research design. Under this design, the descriptive method to first and foremost describe key supply chain drivers and supply chain performance criteria used NG-CDF projects, thereafter to try and explain the cause-effect relationship between supply chain drivers and organizational performance. The choice of this design was



informed by the desire to make an exhaustive analysis of the problem using quantitative data (Creswell, 2013). Consequently, quantitative data was collected, analysed separately and then results were merged for interpretations. The study accessible population targeted departmental heads, procurement officers, project managers and fund managers from respective NCA-4 accredited service providers within Bungoma County which covers 169 staff. Census inquiry was adopted in order to capture every unit in the population which implies complete count. This technique was appropriate since the population of 169 respondents was manageable and the method provides a true measure of the population. Considering that, the sampling units were drawn from various departments of the contractors, the study units were therefore individual employees and HODs in those departments. Consequently, the sampling frame comprised the human resource records listing employees of all departments. Choice of the human resource records was based on the premise that all employment records are handled by the human resource department. In this study, questionnaires were used as the main instrument for collecting data, where close-ended questions were utilized since were deemed appropriate in giving respondents choices of statements which they are to tick based on the study assessment. The data presentation was exhausted using tables.

#### 4.0 DESCRIPTIVE RESULTS

The study was aimed at investigating the influence of supply chain drivers on sustainable performance of constituency development funded projects in the county government of Bungoma.

##### 4.1 Material Flow Management and Sustainable Performance.

The study sought to determine the extent to which respondents agreed with the following statement relating to the influence of Material flow management on sustainable performance of Constituency Development Funded projects in County government of Bungoma. The results are presented in Table 1.

**Table 1: Descriptive Statistics for Material Flow Management**

| Statements   |   | SA   | A    | N   | D   | SD  | Min | Max | M    | Std  |
|--|---|------|------|-----|-----|-----|-----|-----|------|------|
| i.Contractors uses just-in-time system to manage inventory | F | 62   | 74   | 3   | 4   | 6   | 1   | 5   | 4.22 | 0.93 |
|  | % | 41.6 | 49.7 | 2.0 | 2.7 | 4.0 |     |     |      |      |
| ii.Suppliers uses material Requirement planning            | F | 61   | 79   | 2   | 2   | 5   | 1   | 5   | 4.27 | 0.84 |
|  | % | 40.9 | 53.0 | 1.3 | 1.3 | 3.4 |     |     |      |      |

|  |   |      |      |     |     |     |   |   |      |      |
|--|---|------|------|-----|-----|-----|---|---|------|------|
| iii. Material management approaches has improved | F | 63   | 72   | 3   | 6   | 5   | 1 | 5 | 4.22 | 0.93 |
|  | % | 42.3 | 48.3 | 2.0 | 4.0 | 3.4 |   |   |      |      |

**Valid N= 149**

The results depicted in Table 1 show that majority of the respondents agreed that contractors uses just in time system to manage its material flow 136(91.3%), 10(6.7%) of the respondents disagreed and only 3(2.0%). Adoption of JIT approaches improves efficiency of the flow of materials (M=4.22, Std.=0.93). Further, majority 140(93.9%) of the respondents agreed that supplier's material requirement planning to manage its inventory and 7(4.7%) of the respondents disagreed. Having prudent material requirement planning improves customer demand hence better organizational performance (M=4.27, Std.=0.84). Lastly, majority of the respondents agreed that material management approaches has improved firm's storage capacity 135(90.6%). Enhancing management of material help utilize available space (M=4.22, Std.=0.93). The findings are in support of the research findings by Lwiki, (2013) who found out that in line with implementing inventory management practices; businesses have shifted to centralizing. The study findings imply that proper management of inventory leads to better service delivery.

#### 4.2 Multiple Regression Model Results

The study sought to establish the extent of influence of the independent variables on the dependent variables. This was done by generating the coefficient of determination. The results are presented in Table 2.

**Table 2: Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .819 <sup>a</sup> | .671     | .661              | .40962                     | 1.725         |

a. Predictors: (Constant), contractual capacity, ICT, Supplier selection, Material flow management

b. Dependent Variable: Sustainable performance

From the findings in the Table 2 Adjusted R squared is coefficient of determination which tells the variation in the dependent variable due to changes in the independent variable. R is the correlation coefficient which shows the relationship between the study variables.

The value of adjusted R squared was 0.661 an indication that there was variation of 66.1 percent in sustainable performance, due to supply chain drivers, while 33.9% was as a result of unexplained variables. From the findings shown in the table 4.6, it is notable that there exists strong positive relationship between the study variables as shown by the correlation coefficient (R=0.819). The P- value of 0.00 (Lesser than 0.05) implies that service delivery model of sustainable performance was significant at the 5 per cent significance

### **Tests of the Hypotheses**

This study sought to establish the influence of supply chain drivers on sustainable performance of constituency development funded projects in the county government of Bungoma. The tests were carried out using simple regression analysis, multiple regression analysis, correlation analysis and step wise regression analysis. The tests were done at 5% significance level ( $\alpha = 0.05$ ). The evaluation focused on the hypotheses derived from the objectives of the study.

**H<sub>02</sub>: Material flow management has no significant influence sustainable performance of Constituency Development Funded Projects in county government of Bungoma.**

The second hypothesis sought to establish the influence of material flow management on sustainable performance. This hypothesis was tested by regressing material flow management on sustainable performance guided by the equation  $Y = \beta_0 + \beta_2 X_2$  where X represented material flow management and Y denoted sustainable performance. From the findings, Material flow management was significant ( $p < 0.05$ ) in sustainable performance. Supply chain practices has been viewed as an impetus and agent for change in the success of an organization. Prudent material flow management can bring to the organization more specialized and efficient ways of undertaking the given tasks. Lwiki, (2013) pointed out that in line with implementing inventory management practices; businesses have shifted to centralizing. Therefore, proper management of inventory leads to better service delivery. This is particularly important if the enterprise has work practices that are no longer relevant or economically sustainable.

## **5.0 CONCLUSION AND RECOMMENDATIONS**

### **Conclusions of the Study**

The study concluded that material management have positive and statistically significant effect on the performance of NGCDF projects in county of Bungoma. The study also

shows the importance of manage all materials from the design stage to the completion stage because poor management of construction materials affects the overall performance of construction projects in terms of time, cost, quality and productivity. The study also revealed that, the most prevalent practices of materials management are purchasing of materials, material planning method, transportation of materials while the prevalent challenges are lack of proper work planning and scheduling. For effective materials management, measures shown by the study include adequate management and supervision; it shows that administration of sites was the best in respect to conditions for achieving good materials management.

### **Recommendations of the Study**

The study recommends that the state corporations that use NG CDF in Kenya must strive to improve their supply chain practices so as to boost their operational sustainable performance. This study also recommended that the perceived management of materials should directly affect customer loyalty, and should also affect it indirectly via customer satisfaction. As an innovative plan by banks in carry out their service provision to their customers, Kenyan banks have exponentially embraced the use of information and communication technologies in their service provision with an aim of retaining their clients. As well, since change is an inevitable aspect of life, state corporations should establish ways and means of coping with it so as to ensure that all contractual parties are satisfied. Procurement regulations that refer to paper documents and processes need to be modernized. Procurement management and executive courses and seminars should be held to address the effect of automation on the procurement function.

### **REFERENCES**

- Akter, M., & Uddin, M. H. (2017). Supply Chain Operation Model in Terms of Raw Material in Bangladesh Apparel Industry. *International Journal of Textile Science*, 6(2), 43-48.
- Amayi, F. K. (2011). Factors Affecting Procurement in the Public Service: A Case Study of the State Law Office. Eldoret: *International Journal of Operations and Production management*, 221-237.
- Barratt, M., Choi, T.Y., & Li, M., (2011). “Qualitative Cases Studies in Operations Management: Trends, Research Outcomes and Future Research Implications. *Journal of Operations Management*, 29(4), 329-342.
- Berdine, M., Parrish, E., Cassill, N. L., & Oxenham, W. (2008). Measuring the Competitive Better Service Delivery within Non-Governmental Organizations: A

- Case of World Vision International. *European Journal of Business and Social Sciences*, 3(2), 44-58.
- Brenton, P., & Hoppe, M. (2007). Clothing and Export Diversification. Still a Route to Growth for Low-Income Countries? Buyer-supplier relationships. *International Journal of operations & Production management*, 6(4), 238-258.
- Cao, H., Scudder, C., & Dickson, M. A. (2017). Sustainability of Apparel Supply Chain in South Africa: Application of the Triple Top Line. *Textiles Research Journal*, 15(2), 125-134.
- Chemeres, Y. K., Kimutai, G., & Kibet, Y. (2015). Environmental Determinants of Procurement Performance in Youth Polytechnics in Baringo County, Kenya. *Journal of Economics and Finance*, 6(4), 43-48.
- Chepkwony, N. C. (2015). Effect of E- Procurement on Supply Chain Performance in Kenyan State Corporations in Nairobi County. Eldoret. *Contemporary Management Research*, 3(1), 71-82.
- Chimwani, B.I., Iravo, M.A. & Tirimba, O.B., (2014). Factors Influencing Procurement Performance in The Kenyan Public Sector: Case Study of The State Law Office. *International Journal of Innovation and Applied Studies*, 9(4), 1626-1650.
- Christopher, M. (2005), *Logistics and Supply Chain Management*, Pearson Education Limited, England.
- Daniel, K. W., & Ali I. A., (2014). Effects of Information Communication Technology Adoption on Procurement Process in Kenya's Oil Industry. *International Journal of Management and Commerce Innovations*, 2(2), 89-116.
- Flint, G. D., & Van Fleet, D. D. (2005). A Comparison and Contrast of Strategic Management and Classical Economic Concepts: Definitions, Comparisons, and Pursuit of Advantages. *International Journal of Operations and Production Management*, 8(6), 238-258.
- Francis, P. (2013). Impact of Information Technology on Accounting Systems. *Asia-Pacific Journal of Multimedia Services Convergent with Art, Humanities, And Sociology*, 3(2), 93-106.
- Georgise, F. B. Thoben, K.D., & Seifert, M., (2014). Supply Chain Integration in the Manufacturing Firms in Developing Country: An Ethiopian Case Study. *Journal of Industrial Engineering*, 7(3), 45-62.
- Getu, D., & Tegbar, Y. (2006). *Research Methodology*. Ethiopia: University of

Gondar.

Gunasekaran, A., Lai, K., & Edwin Cheng, T.C. (2008) Responsive Supply chain: A Competitive Strategy in a Networked Economy, *Omega*, 36(4), 549-564.

Hines, T., & McGowan, P., (2005). Supply Chain Strategies in the UK Fashion Industry the Rhetoric of Partnership and Realities of Power. *International Entrepreneurship and Management Journal* 1(2), 519–537.

Ideet, I.L., & Wanyoike, D. (2014). Role of Buyer-Supplier Relationship on Supply Chain Performance in the Energy Sector in Kenya: A Survey of Kenya Power and Geothermal Development Companies. *International Journal of Science and Research*, 3(10), 220-240.

Jain, J., Dangayach, G. S., Agarwal, G. & Banerjee, S. (2010). Supply Chain Management: Literature Review and Some Issues. *Journal of Studies on Manufacturing*, 1(2), 11-25.

Kakwezi, P. (2012). Procurement Contract Management in Public Procurement and Disposal Entities. *Research Journal of Economics*, 2(1), 56-72.

Kamau, I. N. (2013). Buyer-Supplier Relationships and Organizational Performance among Large Manufacturing Firms in Nairobi, Kenya. *Master's Thesis*. Nairobi University. Nairobi Press.

Kanda, M. K., & Iravo M. A. (2015). Access Factors Affecting Supply Chain Efficiency of Medical Supplies in Public Health Centres in Kenya: A Case Study of Public Health Centres in Elgeyo Marakwet County. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 5(2), 32–41.

Karimi, K., & Namusonge G.S. (2014). Role of Information Technology on Warehouse Management in Kenya: A Case Study of Jomo Kenyatta University of Agriculture and Technology. *International Journal of Academic Research in Business and Social Sciences*, 4 (11), 36-54.

Kepher, A. B., Shalle, I. N., & Oduma, E. (2015). Role of supplier management on procurement performance in manufacturing sector in Kenya: A case of East African Breweries, Kenya. *International Journal of Social Science and Humanities Research*, 3(4), 540-555.

Kibogo, A.D. & Mwangangi, M. (2014). Factors Affecting Contract Management in Public Procurement Sector in Kenya: A case of Kenya Literature Bureau. *European Journal of Business Management*, 1(110), 377-384.

- Klakegg, O. J, Samset, K. and Magnussen, O. M. (2016). *Improving success in public investment projects; lessons from a government initiative in Norway*. Proceedings 19. IPMA World congress, New Delhi.
- Kombo, D. K., & Tromp, D.L. A. (2006). *Proposal and Thesis Writing*. Nairobi: Pauline Publications.
- Koprulu, A., & Albayrakoglu, M. M. (2007). *Supply Chain Management in The Textile Industry: A Supplier Selection Model with The Analytical Hierarchy Process*. MBA Paper
- Kotabe, M., & Mudambi, R. (2009). Global Sourcing and Value Creation: Opportunities and Challenges. *Journal of International Management*, 15(11), 121–125.
- Kothari C. R. (2013). *Research Methodology: Methods and Techniques*. (3<sup>rd</sup> Ed.). New Age International Publishers.
- Lohman, C., Fortuin, L., & Wouters, M. (2004). Designing a Performance Measurement System: A Case Study. *European Journal of Operational Research*, 4(6), 156-171.
- Marks, E. J. (2007). The Relative Importance of Supplier Selection Criteria: A Review and Update. *Journal of Supply Chain Management*, 30(2), 34-41.
- Mateyz, R., & Maja, B. (2013). Buyer-Supplier Relationships and the Resource Advantage Perspective: An Illustrative example of Relational and Transactional Drivers of Competitiveness. *Journal of Competitiveness*, 5(1), 16-38.
- Mburu, S., & K'Obonyo, P. (2014). Perceived Effect of Performance Contracting on Performance of Kenya Agricultural Research Institute. *Journal of International Management*, 34(11), 221–245.
- Muma, B. O., Nyaoga, B. R., Matwere, B. R., & Nyambega, E. K., (2014). Green Supply Chain Management and Environmental Performance among Tea Processing Firms in Kericho County, Kenya. *International Journal of Economics, Finance and Management Science*, 2(5), 270-276.
- Muthini, J. N., Namusonge, G. S., Guyo W., & Shale N.I, (2017). Role of Government Economic Regulations on Petroleum Supply Chain Management. *Journal of International Management*, 15(11), 131-139.
- Mwikali, R., & Kavale, S. (2012). Factors Affecting the Selection of Optimal Suppliers in Procurement Management. *International Journal of Humanities and Social Science*, 2(14), 189-193.
- Naibor, G. S., & Moronge, M. (2018). Influence of Supplier Selection Criteria on

- Performance of Manufacturing Companies in Kenya. *The Strategic Journal of Business & Change Management*, 5(1), 355 – 377.
- Ni, M., Xu, X., & Deng, S. (2007). Extended QFD and Data Mining Based Methods for Supplier Selection in Mass Customization. *International Journal of Computer Integrated Manufacturing*, 20(2-3), 280-291.
- Obura, J., Ombok, B.O., & Omugah, G. (2017). Analysis of Rice Supply Chain in Kenya. *International Journal of Managerial Studies and Research*, 5(8), 12-17.
- Osoro, A., Muturi, W.M., & Ngugi, P.K., (2016). Determinant Affecting Performance of Supply Chain Systems in the Petroleum Industries in Kenya. *European Journal of Logistics Purchasing and Supply Chain Management*, 4(4), 44-63.
- Pauline J., Wanyoike, D. M., & Richu, S., (2014). Assessment of the Role of Materials Management on Organizational Performance. A Case of New Kenya Cooperative Creameries Limited. *European Journal of Material Sciences*, 1(1), 1-10.
- Porter, M.E., & Kramer, M. R. (2006). Strategy and Society: The link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review*, 79–92.
- Prajogo, D., & Olhager J. (2012). Supply Chain Integration and Performance: The Effects of Long-Term Relationships, Information Technology and Sharing, and Logistics Integration. *International Journal of Production Economic*, 135(22), 514–522.
- Rotich, G. K., & Okello, B., (2015). Analysis of Use of E-Procurement on Performance of the Procurement Functions of County Governments in Kenya. *International Journal of Economics, Commerce and Management*, 3 (6), 1381-1398.
- Saldana, J., Huberman M., & Miles, M.B. (2013). Qualitative Data Analysis: A Methods Sourcebook and the Coding Manual for Qualitative Researchers. *Journal Technical Communication Quarterly*, 24(1), 1-15.
- Silvestro, R., & Lustrato P. (2014). Integrating Financial and Physical Supply Chains: The Role of Banks in Enabling Supply Chain Integration. *International Journal of Operations & Production Management Jarrett*, 34(3), 298-324.
- Tabachnick, B.G., & Fidell, L.S. (2013). Using Multivariate Statistics. (6<sup>th</sup> Ed.). Pearson Education, Inc., New Jersey.
- Tang, C. S., & Zimmerman, J. (2013). Information and Communication Technology for Managing Supply Chain Risks Communications of the ACM. *Journal of International Management*, 56(7), 27–29.



- Trevor, C., Marshall, D., & Cao, G. (2013). Opposites Attract: Organizational Culture and Supply Chain Performance. *Supply Chain Management: An International Journal*, 18(1), 86-103.
- Tsai, T.C. (2011). An ERP Model for Supplier Selection in Electronics Industry. *Expert Systems with Applications*, 38(3), 1760-1765.
- Tuigong, D. R., & Kipkurgat, T. K. (2015). Challenges and Opportunities Facing Textile Industries in Kenya in the Wake of Africa Growth and Opportunity Act. *International Journal of Advanced Research*, 3(9), 520 – 523.
- Vincent N., & Muturi, W. (2017). Effect of Supplier Selection Criteria on Performance of the Procurement Function of County Governments in Kenya: The Case of Nyamira County. *International journal of social sciences and information technology*, 3(2), 13-28.
- Wabwile, L.N., & Namusonge, G.S. (2015). Determinants of Outsourcing as a Competitive Strategy in Supply Chain Management of Manufacturing Companies in Kenya. A Case Study of East African Breweries Limited. *International Journal of Academic Research in Business and Social Sciences*, 5(5), 56-71.
- Waithaka, S.T., Mburu, T.M., Koror, J., & Muathe, S., (2012). Environmental Factors that Influence Supply Chain Management Implementation in the Manufacturing Industries in Kenya: A Case of Manufacturing Industries in Nairobi, Kenya. *Journal of Advanced Research*, 1(3), 43-62.
- Weeks, M.P., & Namusonge, G.S. (2016). Influence of Information Technology Practices in Procurement on Organization Performance in Public Institutions in Kenya. A Case of Jomo Kenyatta University of Agriculture and Technology. *International Journal of Economics, Commerce and Management*, 4(5), 67-81.