EFFECT OF CONTRACT MANAGEMENT ON SUPPLY CHAIN EFFICIENCY IN DEVOLVED HEALTH SYSTEM IN THE COUNTY GOVERNMENT OF HOMA BAY, KENYA

Samoei, J. K., & Okello, B. O.

The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN: 2312-9492 www.strategicjournals.com
Vol. 7, Iss. 2, pp 672– 686. June 26, 2020. www.strategicjournals.com, ©Strategic Journals

EFFECT OF CONTRACT MANAGEMENT ON SUPPLY CHAIN EFFICIENCY IN DEVOLVED HEALTH SYSTEM IN THE COUNTY GOVERNMENT OF HOMA BAY, KENYA

Samoei, J. K.,[1*] & Okello, B. O.[2]

[1*]Msc. Scholar, Jomo Kenyatta University of Agriculture and Technology [JKUAT], Kenya
[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology [JKUAT], Kenya

Accepted: June 25, 2020

ABSTRACT

This study aimed at establishing the effect of contract management on supply chain efficiency of devolved health system of Homa Bay County, Kenya. The study was conducted using descriptive survey design and targeted 246 senior County officials attached to procurement, administration, health and finance departments in various Sub Counties of Homa Bay County (Homa Bay County Public Service Commission, 2019) out of which a sample size of 132 respondents were drawn and selected using stratified random sampling and purposive sampling methods. Questionnaires were used to collect data after pilot testing them in public hospitals in Kisumu County. The questionnaires were also pretested to ensure content validity and for reliability at the recommended Cronbach alpha of 0.7. The data was analyzed using both descriptive and inferential statistical methods. The findings revealed that contract management had a significant effect on the Supply chain efficiency in healthcare facilities in Homa Bay County. This implied that improving contract management would significantly influence the efficiency of the supply chain to the healthcare facilities in Homa Bay County. The study recommended that health facilities revise their contracting policies and procedures and communicate them to suppliers so as to draw contracts for certain levels of contracts exceeding a specified amount of money.

Key Words: *Contract Management, Supply Chain Efficiency*

CITATION: Samoei, J. K., & Okello, B. O. (2020). Effect of contract management on supply chain efficiency in devolved health system in the county government of Homa Bay, Kenya. *The Strategic Journal of Business & Change Management*, 7(2), 672 – 686.

INTRODUCTION

Rapid innovation, increasing customer demand, globalization and obsolescence of products are prompting an increasing number of firms to concentrate on their supply chains to remain competitive. Public organizations are not exceptional. In many industries today, competitive success depends upon performance improvements at the supply chain level. The ability to innovate and improve lies within the relationships forged among the business partners who are chain members (Lejeune & Yakova, 2005). Procurement planning can be an important tool for achieving high supply chain performance in the public sectors when well designed and implemented. The primary concept of procurement planning is that advance planning will result in cost savings, more efficient business operations, and therefore increased profitability.

Procurement planning is one of the most important steps in the public procurement cycle. The procurement plan is expected to list all the requirements that are under the responsibility of a particular procurement entity and that are expected to be procured over a period of time (usually one year, but could be longer when dealing with project procurement).There are instances where some items that are below a certain monetary threshold are not listed on the procurement plan; however, effort should be made to have everything that a particular procurement entity is responsible for procuring listed on the procurement plan of that procurement entity. The procurement plan is not only useful for determining what needs to be procured, and by when, but it's also for determining the need for additional manpower to support the preparation of specifications and bid documents, requesting, receiving and evaluating offers, contract negotiations and award, and contract administration, given the number of procurement requirements within a certain period of time.

Supply chain management (SCM) has been termed as a crucial function in many organizations whether in the service or production industry. This is because every organization aims at satisfying their customers whether internal or external which in turn lead to improved performance (Kopczak & Johnson 2003). Supply chain governance has changed the way public sector operates. This is as a result of integration which enhances co-ordination of demand in order to satisfy customers' needs. Carter and Rogers (2008) pointed that Supply Chain Governance not only help organizations to streamline and manage supplier quality and supplier performance, but also enables them to identify, mitigate and manage supplier risks for key procurement and manufacturing processes.

A growing number of countries both in the developed and lately developing world have in the last three decades been decentralising the administrative, fiscal and political functions of the central government to sub-national governments and other agencies. These countries include the United Kingdom, the United States, India, the former USSR, Italy, Spain and Australia (Calamai, 2009). Some African countries such as Ethiopia, Nigeria and Kenya have also entrenched devolution in their governance structures. In many cases, the quest for devolution has been driven by the need to bring government services closer to the people, the growing pressure on public sector reforms, the need for more representation and inputs in the management of public affairs by the citizens and fairness in the distribution of political and economic resources (Cheema & Rondinelli, 2007).

Homa Bay County is one of the 47 Counties set up by the Constitution of Kenya 2010 that came into being in March 2013 when power was decentralized from the centre (Nairobi) to the 47 Counties. The county is one of the largest County's in Kenya with a population estimated at 213,116. The County has been characterized with a myriad of health challenges of the year which has seen the national government, County government and other Non-Governmental

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

Organizations allocating funds towards better health care. For example, the County has witnessed one of the highest level of HIV Aids prevalence and efforts have been put in place to alter the situation. Irrespective of the efforts by the government and other development partners, little has been achieved. Further, in the wake of devolved government system, the County is yet to achieve much with respect to supply Chain efficiency which has been greatly attributed to poor procurement planning. This has further led to deteriorating health standards in the County as funds which have been allocated for health improvement programs have failed to yield any formidable results. Therefore, with the increased demand for better services in the public sector, there is need to effectively manage the public supply chains.

Statement of the Problem

The Ministry of Health (MoH) is the major financier and provider of health care services in Kenya in Kenya. Public Hospital procurement accounts for 25% of the annual government procurement expenditure. The central government spends about Ksh. 234 billion per year on procurement. However, on annual bases, the government losses close to Ksh. 121 billion about 17 percent of the national budget due to inflated procurement quotations. According to Public Procurement Oversight Authority (PPOA 2014), most of the tendered products/services in many public hospitals have a mark-up of 60 percent on the market prices. In the year 2014, county governments, under which public hospitals fall lost 4.2 billion shillings (Daniel, 2015). The inefficiency and ineptness of overall implementation of procurement plan in many public hospitals contributes to loss of over Ksh.500 million annually (Tom, 2015). Country Procurement Assessment Report (CPAR), prepared by a team of Government officials, World Bank and donor staff, and national consultants, reveals substantial inefficiency in public procurement and concludes that the principle of "value for money" is not achieved. This is true for both governments financed and donor financed procurement. Majority of these challenges in the health sector can be traced back to the procurement planning (World Bank, 2014).

Research by the Price Water House Coopers found that as much as 37% of the potential value of a procurement plan in public hospital in Kenya is lost during Implementation. According to health sector performance report 2013 and 2014 health institutions are ailing from shortage of drugs or holding on expired drugs. Health centres and dispensaries are hardly stocked with the recommended medicines (Ondigi & Muturi 2015). This is suggestive of poor planning and high wastage of public resources in the counties this affects efficient delivery of quality services. Some of these losses would have been mitigated if the supply chain was handled properly. Further, inflexible and bureaucratic systems of SCM in the public sector have contributed to unacceptable contract delays, increased costs and potential for manipulation, creating a perception that public expenditure is low ineffective, expensive and often corrupt calls for implementation of supply chain governance mechanism (Ngugi & Mugo, 2011). While there is growing evidence of the losses due to poor procurement planning and implementation in the country, little is known on how this impact the supply chain efficiency in the public health sector. Previous studies in health sector procurement have studied the two constructs of planning and supply chain efficiency separately and so far no attempt has been made to link them. This study, therefore, sought to conduct an in depth analysis of the influence of contract management on supply chain efficiency within the context of devolved system of government specifically in Homa Bay County, Kenya.

Objective of the Study

The main objective of the study was to analyze the effect of contract management on supply chain

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

efficiency of devolved health system of Homa Bay County, Kenya.

The research hypothesis was;

$H0_0$ There is no significant effect of contract management on supply chain efficiency

LITERATURE REVIEW

Resource Dependency Theory

Resource dependence theory was originated by Pfeffer and Salanchik (1978). The theory takes the view that a business relationship is a social exchange of critical resources with mutual dependency among the exchange partners. Thus, the survival and growth of organizations largely depend on the ability to secure critical resources from the external environment (Casciaro & Piskorski 2005). But a relationship between organizations is not free. Transaction cost analysis (TCA) suggests that every transaction has a cost. These costs are incurred for adaptation, performance evaluation and safeguarding, and are associated with uncertainty, opportunism, and transaction specific assets (TSAs) invested in the relationship. Transaction specific assets refer to the assets specialized to service the particular needs of the exchange parties (Williamson, 1996). Firms invest in TSAs in order to create additional value from an exchange above what standard product and service offerings can do (Ghosh and John,1999). Examples of TSAs include the development of idiosyncratic knowledge, the provision of dedicated human resources and training, and capital investment in specialized equipment and facility improvement (Williamson, 1996)

Although resource dependence theory and transaction cost analysis depart from different points of view (sociology and new institutional economics, respectively), they have something in common. While resource dependence theory focuses on *ex ante* mutual dependence between exchange partners due to critical resources, transaction cost analysis assumes that two parties are initially independent but develop bilateral dependence *ex post* due to relationship-specific assets invested over the course of the relationship (Casciaro & Piskorski 2005). Despite these different views, however, both theories recognize the existence of interdependency between exchange partners and the importance of securing valued resources from environmental and behavioral uncertainty (Heide, 1994).

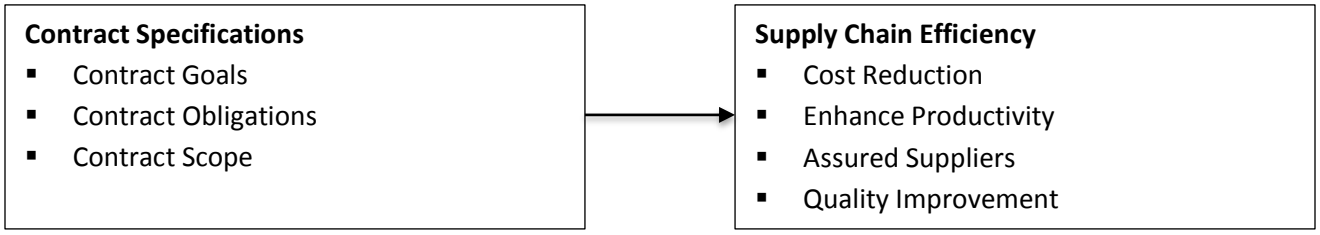
Specifically, based on utilitarian assumptions of self-interested behaviors of exchange partners, transaction cost analysis argues that TSAs raise the cost of safeguarding against a behavioral uncertainty of an exchange partner such as an opportunistic behavior where one party may exploit the other for unilateral benefits Being unique to a relationship, and possessing little or no value upon the relationship termination, TSAs are often viewed as “valuable but vulnerable” investments (Ghosh & John 2005). Combining the resource and transaction cost perspectives into a strategic point of view, Ghosh & John (1999) proposed a governance value analysis (GVA) framework that links resources, positioning strategy, TSAs and governance. They argue that a firm creates potential market value through a unique positioning and can claim those values through a competitive advantage based on firm-specific resources. In an effort to achieve competitive advantage in the market, firms align themselves with exchange partners (i.e., customers and suppliers) and create joint values, such as cost reduction and/or value addition, through investments in TSAs.

While creating maximum values from the market, (Ghosh & John 2005) argue that firms should safeguard their share of values jointly created as well as their investments in TSAs against opportunism through strategic selection of relationship governance. For example, the authors found, in a later study on industrial alliances, that OEMs given a high level of specific investments achieve a high level of cost reduction from less flexible contracts with their suppliers while achieving a high level of end-product

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

enhancement from more flexible contracts (Ghosh & John 2005). Based on these findings, they suggest that OEMs take different "governance value engineering" approaches to supplier relationship management depending on their primary pursuit of strategic outcomes (i.e., cost reduction vs. product enhancement).

The resource dependency theory was used in this study to give more insight into the resource requirements and procedures of the procuring entities especially with regard to planning so as to ensure there is supply chain efficiency.



Independent Variable

Dependent Varible

Figure 1: Conceptual Framework

The fundamental purpose of Contract and Supplier Management is to ensure that suppliers meet their contractual obligations, and that the contract requirements are successfully delivered (Nzambu, 2015). This includes meeting any special contract performance conditions, indicated in the competition documentation and related to the contract subject-matter, which may cover economic, innovation-related, environmental, social or employment-related conditions (Wan, 2014). It is, therefore, essential that anyone engaged in managing suppliers reads and fully understands the contract terms and conditions, otherwise they are at a permanent disadvantage should any issues arise (Langat, 2012). It is essential that the Organization's Contract Manager/Contract Management Officer is engaged from the Develop Strategy stage early in the process and participates in the development of the terms & conditions.

According to Nyste´n-Haarala, Lee and Lehto (2010), business people often understand contracts as legal documents, designed by lawyers in order to protect firms against risks and prepare them for potential litigation in the worst case scenario. Contract law guru Macaulay (1963) contended that business people only made deals and offers, but avoided "contracts". Thus, contracting in practice differs largely from what contract law models the practice to be. Soft elements of contracting were often not recognized as contracts (Nyste´n-Haarala *et al.,* 2010). At the extreme, contracts may be viewed as a necessary evil. If a sales unit of a firm holds this view of contracts, they may be viewed as a burden, and perhaps even a hindrance, to the smooth conclusion of business.

The contract management teams are an important component of supplier management. A study by Shiwa (2014) on the effectiveness of contract management on contractors' performance focusing on Oil and Gas Companies in Tanzania established that CM teams had direct relationship with HSE performance; in average an increase unit of CM team had 0.5-unit increase of HSE performance. The study findings also confirmed those of Basheka *et al*., (2013) who observed that among the major determinant to effective CM are accurate definition of roles and diverse CM knowledge of the CM team. Kingoo (2013) indicated that the need of having a staffed and competent CM team to monitor contractor's performance. Shiwa (2014) further established that some of the SOW is weak and other

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

robust depends on the experience, skill and knowledge of the demand manager.

Notwithstanding the above Basheka et al., (2013) observe CM as being qualified workforce, quality of people and management system of the company in monitoring contractor's performance outcome. Kemunto and Ngugi (2014), however, differed on the need of adequate skills when recruiting and retaining more experienced and qualified key CM staff in managing contractor's performance. Basheka, Tumutegyereize and Sabiiti (2013) study in Ugandan SOEs revealed that teams entrusted with negotiating do not abide with the contract objectives and sometimes do not have the ability to contract. The study also found that the absence of clear procedures tempts the contracting team to set their own procedures.

Empirical Review

A study by Masaba, Moses and Eya (2015) on contracting and procurement performance of state owned enterprises in Uganda established that there existed a strong positive relationship between contracting and procurement performance (r =.653). The study also found that contracting predicted procurement performance of SOEs up-to nearly 60% variance for every unit percentage positive change (Beta = 0.595). In addition, procurement performance was also positively related to contract objectives, ability to contract, and procedures. These results suggest that SOEs that exercise good contracting processes have higher procurement performance levels and vices versa. This implies that state owned enterprises (SOEs) with a good procurement performance are associated with good contracting systems. It is therefore evident from the findings that if SOEs are to improve on their procurement performance attention should be devoted towards strengthening the contracting process and avoiding activities that would undermine the successful working of the contracting process. This study was based on Uganda and was therefore contextually different from the current study.

Wanyonyi and Muturi (2015) in their study found that the main areas that were observed to be the key contributors to staff competence included the training of new employees in the procurement departments, enhancing team work of procurement staff, acquaintance of the procurement Act by the procurement team and employing qualified and competent personnel in the procurement departments among others. Ogwel, Iravo and Lagat (2016), however, failed to find any association between planning on teamwork and procurement performance in Trans-Nzoia County, Kenya.

METHODOLOGY

The study adopted a descriptive case study research design, which is defined as an empirical inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident (Yin, 2003). The target population in this study was a population of 246 senior County officials attached to procurement, administration, health and finance departments in various Sub Counties of Homa Bay County (Homa Bay County Public Service Commission, 2019). For sampling procedure, the study employed a probabilistic sample through the use of stratified random sampling followed by purposive sampling on its sample size, since the population of interest was found in different departments within the larger Homa Bay County and is thus heterogeneous. The structured questionnaire containing a mix of questions, allowing for both open-ended and specific responses, some on a 5 point Likert scale, was used in this study. Qualitative method of data analysis was emphasized through the use of descriptive statistics. Data was analyzed by help of Statistical Package for Social Sciences (SPSS) and the results presented in tables in the form of measures of central tendency such as mean, variation such standard deviation for better understanding.

RESULTS

Contract Management and Supplier Performance

The objective of this study was to determine the effect of contract management on supply chain efficiency of devolved health system in Homa Bay County. The status of this variable was described in terms of contract goals, contract obligations and contract scope. A five point Likert scale was used to rate responses of this variable and it ranged from; 1 = strongly disagree to 5 = strongly agree and was analyzed on the basis of the mean score and standard deviation. The closer the mean score on each score was to 5, the more the agreement concerning the statement. A score around 2.5 would indicate uncertainty while scores significantly below 2.5 would suggest disagreement regarding the statement posed. The results were presented in Table 1.

Table 1: Contract Management and Supplier Performance

Statement	SA Freq(%)	A Freq(%)	N Freq(%)	D Freq(%)	SD Freq(%)	Mean	Std. Dev
The health facility contracts are based on the organization's objectives	14(13)	58(55)	20(19)	12(11)	2(2)	3.79	0.629
The health facility contracts have detailed the obligations and rights of every party	11(10)	69(65)	13(12)	12(11)	1(1)	3.95	0.576
The health facility's contract goals are to achieve the highest standard of goods and services and this is communicated to suppliers	13(12)	51(48)	19(18)	18(17)	5(5)	3.48	0.774
The health facility ensures that its exercise due diligence when drafting our procurement contracts so as to be consistent with our goals	17(16)	51(48)	26(25)	9(9)	3(3)	3.81	0.535
The health facility only draw contracts for certain levels of contracts exceeding a specified amount of money	11(10)	40(38)	36(34)	16(15)	3(3)	2.96	0.946
The contract specifications enable the hospital to trace the contract process	8(8)	52(49)	35(33)	9(9)	2(2)	3.83	0.838
The health facility ensures that it agrees on the contract specifications with the supplier before finally drafting the contract	8(8)	52(49)	36(34)	10(9)	0	3.80	0.574
Through agreeing on contract specification with suppliers, the health facility has been able to avoid legal problems	23(22)	72(68)	10(9)	1(1)	0	4.16	0.946
Aggregate						**3.67**	**0.696**

Looking at the results in Table 1 it is evident that based on the aggregate mean 3.67 and standard deviation 0.696 majority of the respondents agreed with most of the statements suggesting that for the most part contract management was duly done in their healthcare facilities. In particular, majority of the respondents (mean = 3.79) agreed that their health facility contracts are based on their organization's objectives. Most agreed that their health facility contracts have detailed obligations and rights of every party to the contract (mean = 3.95). The findings also indicated that most of the respondents agreed that their health facility contract goals were to achieve the highest standard of goods and services and this was communicated to their suppliers (mean = 3.48). Majority of the health facilities also ensured that they exercise due diligence when drafting procurement contracts so as to be consistent with their goals (mean = 3.81). However, there was uncertainty on whether the health facilities only drew contracts for certain levels of contracts exceeding a specified amount of money (mean = 2.96). Other findings indicate that the contract specifications enabled most healthcare facilities to trace the contract process (mean = 3.83). Most of the health facilities also ensures that they agreed on the contract specifications with the supplier before finally drafting the contract (mean = 3.80). Further, most of the health facilities had been able to avoid legal problems through agreeing on contract specifications with their suppliers (mean = 4.16).

These findings implied that the healthcare facilities were keen on upholding contract management practices and they had clear Contract goals, Contract obligations and Contract Scope all drafted within their procurement contracts. This had been very instrumental in enabling most of the health facilities to avoid legal problems through agreeing on contract specifications with their suppliers. This agrees with Langat (2012) that it was essential that anyone engaged in managing suppliers reads and fully understands the contract terms and conditions, otherwise they are at a permanent disadvantage should any issues arise

Supply chain efficiency of devolved health system in Homa Bay County

The study sought to determine the status of supply chain efficiency of devolved health system in Homa Bay County. This was the dependent variable and the status of this variable was described in terms of Cost Reduction, Enhanced productivity, Assured supplies and Quality improvement. The status of this variable was rated on a 5 point Likert scale ranging from; 1 = strongly agree to 5 = strongly disagree and was analysed on the basis of the mean score and standard deviation. The closer the mean score on each score was to 5, the more the agreement concerning the statement. A score around 2.5 would indicate uncertainty while scores significantly below 2.5 would suggest disagreement regarding the statement posed. These results were presented in Table 2.

Table 2: Supply chain efficiency of devolved health system in Homa Bay County

Statement	SA Freq(%)	A Freq(%)	N Freq(%)	D Freq(%)	SD Freq(%)	Mean	Std. Dev
The health facility organization experienced considerable cost reduction in the last reporting period due to supply chain stability	21(20)	23(22)	0	47(44)	15(14)	2.3	0.902
The health facility has seen enhanced supply chain productivity	17(16)	30(28)	0	41(39)	18(17)	2.68	0.814
The health facility has assured	18(17)	30(28)	5(5)	46(43)	7(7)	2.71	0.773

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

supplies for its operations							
The health facility has accured very minimal debts in the last 3 years	14(13)	36(34)	5(5)	35(33)	16(15)	3.31	0.51
All funds are often allocated adequately as per the votes	19(18)	20(19)	4(4)	54(51)	9(9)	3.18	0.748
The health facility's procurement department seldom requests for extra funding for procurement	25(24)	16(15)	3(3)	56(53)	6(6)	3.61	0.712
The health facility has been able to acheive most of our performance targets in good time	20(19)	20(19)	1(1)	50(47)	15(14)	2.79	0.603
The health facility has been able to improve on its quality standards	11(10)	40(38)	36(34)	16(15)	3(3)	3.43	0.96
Aggregate						**3.001**	**0.753**

It can be deduced from the aggregate means of 3.001 that there was uncertainty on the status of supply chain efficiency of devolved health system in Homa Bay County. The standard deviation of 0.753 also indicated that the variations on this view was small. Particularly, most respondents disagreed that the healthcare facilities experienced considerable cost reduction in the last reporting period due to supply chain stability (mean = 2.3). Further, there was uncertainty on whether the healthcare facilities had seen enhanced supply chain productivity (mean = 2.68). There was also uncertainty on whether most healthcare facilities had assured supplies for their operations (mean = 2.71). However, majority of the healthcare facilities had accrues very minimal debts in the last 3 years (mean = 3.31) though all funds were not often allocated adequately as per the votes (mean = 3.18). Most health facilities' procurement departments seldom requested for extra funding for procurement (mean = 3.61). However, there was uncertainty on whether the healthcare facilities had been able to acheive most of their performance targets in good time (mean = 2.79), though most had been able to improve on its quality standards (mean = 3.43).

Therefore, it can be deduced from these findings that the supply chain efficiency of the healthcare facilities in the area was not satisfactory.

Hypothesis Testing

The hypothesis was tested under the null hypothesis;

HO_0: Contract Management has no significant effect on Supply chain efficiency in healthcare facilities in Homa Bay County

It was evident from the results that there was indeed a significant relationship between the variables ($\beta = 0.407$, $p < 0.05$). This meant that the null hypothesis was rejected. Therefore, it can be inferred that improving contract management practices could translate to higher levels of supply chain efficiency in healthcare facilities in Homa Bay County. These results were in agreement with a study by Masaba et al., (2015) on contracting and procurement performance of state owned enterprises that established that there existed a strong positive relationship between contracting and procurement performance. This implied that state organizations with a good procurement performance are associated with good contracting systems. It is therefore evident from the findings that if state organizations were to improve on their procurement performance attention should be devoted towards strengthening the contracting process and avoiding activities that would undermine the successful working of the contracting process.

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

CONCLUSIONS AND RECOMMENDATIONS

The objective of this study was to determine the effect of contract management on supply chain efficiency of devolved health system in Homa Bay County. The findings revealed that the healthcare facilities were keen on upholding contract management practices and they had clear Contract goals, Contract obligations and Contract Scope all drafted within their procurement contracts. This had been very instrumental in enabling most of the health facilities to avoid legal problems through agreeing on contract specifications with their suppliers. In particular, majority of the health facility contracts are based on their organization's objectives. Most health facility contracts had detailed obligations and rights of every party to the contract. The findings also revealed that most of the respondents agreed that their health facility contract goals were to achieve the highest standard of goods and services and this was communicated to their suppliers. Majority of the health facilities also ensured that they exercise due diligence when drafting procurement contracts so as to be consistent with their goals. However, there was uncertainty on whether the health facilities only drew contracts for certain levels of contracts exceeding a specified amount of money. Other findings indicate that the contract specifications enabled most healthcare facilities to trace the contract process. Most of the health facilities also ensures that they agreed on the contract specifications with the supplier before finally drafting the contract. Further, most of the health facilities had been able to avoid legal problems through agreeing on contract specification with their suppliers. Results from the multiple regression analysis revealed that there was indeed a significant relationship between the variables indicating that the efficiency of the supply chain to the healthcare facilities in the area was highly dependent on the contract management practices used by the healthcare facilities.

The study also concluded that contract management significantly influenced the efficiency of the supply chain to the healthcare facilities in Homa Bay County. This implied that the supply chain efficiency in the county's the healthcare facilities was highly dependent on the contract management practices used by the healthcare facilities. Therefore, it can be inferred that improving contract management practices could translate to higher levels of supply chain efficiency in healthcare facilities in the County.

Following the conclusions of the study, the study made the recommendations that; in relation to contract management and supply chain efficiency of healthcare facilities in the area, the study recommended that the health facilities revise their contracting policies and procedures and communicate them to suppliers so as not only to draw contracts for certain levels of contracts exceeding a specified amount of money. This would improve on the health facilities contract goals on achieving the highest standard of goods and services.

Suggestions for future studies

More studies should be done on procurement forecasting techniques used by public healthcare facilities and also on the effects of supplier development on supply chain performance of public healthcare facilities.

REFERENCES

Abouzeedan, A., & Busler, M. (2012). Information Technology (IT) Impact on Performance of Small and Medium Enterprises (SMEs), Proceedings of the RENT XVI, Research in Entrepreneurship and small Business. http://gbr.sagepub.com/content/7/2/243.refs (10th June, 2016).

Amemba, C., Nyaboke., G., & Mburu, N. (2015). Challenges Affecting Public Procurement Performance Process in Kenya. Unpublished PhD Thesis, Jomo Kenyatta University of Agriculture and Technology.

Andrew, A. (2012). Strategic sourcing process model. Journal of Business & Industrial and Labor Relations Review, 17, (1) 99-120.

Andrew, M. (2011). Procurement Reforms in Kenya, Journal of Economics, 22(1), 23-50

Apiyo, R.O.(2014). Factors affecting procurement planning in county governments in Kenya, case study of Nairobi City County. International Journal of Economics, Commerce and Management, 2, (11), 1-34

Arani W. N. & Kabare K. (2013). Factors influencing outsourcing decision of logistics activities in large manufacturing firms in Nairobi, Kenya. *Asian Academic Research Journal of Multidisciplinary, 1*(3), 132-177.

Arrow S. (2014). An overview of EC policy on public procurement: *European Journal of Operational Research, 202* (1), 16-24

Basheka, B.C. (2014). Procurement and Local Governance in Uganda: a factor analysis approach, International Journal of Procurement Management, Vol.2, Number 2.

Bolton, W.C. (2012). Power influences in the supply chain. *Journal of Operations Management, 26* (2), 148-163.

Cane, W. (2014). Supply chain management practices and organization performance. *Journal of Supply Chain Management, 26* (2), 148-163.

Carter. R & Kirby. S, (2014). *Practical procurement. Practical guide to procurement for both students and practitioners*, Cambridge Academic Publishing.

Chatterjee, S., Seddon, P. B. & M-Y Kiew, A Partial Test and Development of the DeLone and McLean Model of IS Success, Proceedings of the International Conference on Information Systems, Vancouver, Canada (ICIS 94) (1994), 99-110.

Christianne D, (2013). New developments in employee training. work study. *International Journal of Management, 29*(1), 56 – 55

Cooper, R., & Schindler, S., (2003). Business research methods. Irwin: McGraw- Hill.

Daniel, B. (2015). Cooperative sourcing, simulation studies and empirical data on outsourcing. Journal of Operation Management 44, (6), 144- 167.

DeLone, W. H. & McLean, E. R. (2014) Information Systems Success: The Quest for the Dependent Variable, *Information Systems Research, 3*(1), 60-95

Dobler, D.W. (2012). *Purchasing and Supply Management.* Singapore: McGraw- Hill Companies, Inc.

Dobler, H & Burt, T. (2012). *Purchasing and supply Management* (6th Edition), McGraw Hill Companies Inc.

Eisenhardt, K.M. (2009), *Agency theory: an assessment and review,* Academy of Management.

Field, A. (2009). *Discovering Statistics using SPSS.* London: Sage.

George, K (2013). Procurement of technical works. *Journal of Procurement, 22* (2), 146-143.

Grindle, M & Thomas, T. (2000). Managing supplier relationships. *Journal of Business Logistics 28* (1), 111-35.

Hagen, H,-O., Zeed, J. (2015). Does ICT Use Matter for Firm Productivity? Yearbook on Productivity 2015, Statistics Sweden, Stockholm,

http://is2.lse.ac.uk/asp/aspecis/20080092.pdf (25th June, 2016).

Hall, J. (2009). Environmental supply chain dynamics, *Journal of Cleaner Production, 12*(7), 119-133.

Handfield, R.B. (2014). *Purchasing and supply chain management* (2nd Ed). New Jersey: Pearson Publishers.

Hughes, R., & Thorpe, D. (2014). A review of enabling factors in construction industry productivity in an Australian environment, Construction Innovation: *Information, Process, Management, 14*(2), 210–228.

Ingram, D. (2012). Internal Factors of Strategic Plan Implementation eHow.com http://www.ehow.com/way_5765349_internal-factors-strategic-plan-implementation.html#ixzz2ArBLFQt1 (20th August, 2016).

Inyang, F., Inyang, B. & Glory B. (2013). Corporate profitability through effective management of materials, the case of flour mills company Lagos. *European Journal of Business and Management, 5* (29)

Jaafar, M., & Nuruddin, A.R. (2012). The development of public and private construction procurement systems in the Malaysian construction industry, *Journal of Design and Built Environment, 11* (2), 33-47

Juma, C. (2010). Policy research in sub-Saharan Africa: An Emploration'. Public Administration and Development, 15, (2), 121–137.

Juma, S., & Clarke, N, (2005). Discourses of Development: The View from Anthropology, introduction of Grillo, R. and Stirrat, R. L. (eds) Discourses of Development: Anthropological Perspectives. Oxford: Oxford International Publications.

Kipkemoi, S. L. (2013) Effects of the elements of public procurement practices on project implementation: a case of Kericho District, International journal of innovative research & development, 3 (10), 1-30.

Kothari, C.R. (2004). Research Methodology: Methods and Techniques New Delhi: Kings Mill.

Kuo, E.F., Wei Z.C., Lon, C.H., & Shih, S.P. (2012). An ABC Analysis Model for The Multiple Products Inventory Control, *Proceedings of the Asia Pacific Industrial Engineering & Management Systems Conference*,

Lee, P. B. (2009). A Respecification and Extension of the DeLone and McLean Model of IS Success, Information Systems Research, 8, (3), 240-253.

Lema, A. M. (2013). Assessment of Factors Affecting Implementation of Annual Procurement Plan in Local Government Authorities: A Case Study of Meru District Council, Arusha, Tanzania. Unpublished MBA Thesis, The Open University of Tanzania.

Lin. T. (2008). Service Quality: A Measure of Information Systems Effectiveness, MIS Quarterly, 19, (2), 173-188.

Manyara, H. (2016.) Assessment of Annual Procurement Planning. Procurement Journal 1 (7), 1821-6021.

Maurer, C. (2014). The case for procurement outsourcing. *Journal of Procurement. 33*(7) 144-146.

Milassy H.I. (2015). Research Paper on Evaluation of Procurement Procedures in Local Government Authorities.

Mlinga, R. (2014). Effectiveness of Procurement Planning, a Paper Presented at the Annual Workshop for the Secretaries of Tender Boards at the Paradise Resort - Bagamoyo.

Mugenda, O. M., & Mugenda, A. G. (2003). *Research methodology* (2nd Ed). Research Methods; Quantitative and Qualitative Approaches. Nairobi Acts Press.

Mugenda, O. M., & Mugenda, A. G. (2008). *Research methodology.* (2nd Ed). Research Methods; Quantitative and Qualitative Approaches. Nairobi Acts Press.

Mullins, C. (2013), Imagining what's possible, Information. *Journal of procurement Management, 32*(12) 132-138.

Nakamura, A. (2014), Optimal supply chain network design and redesign at minimal total cost and with demand satisfaction. *International Journal of Production Economics, 128*(2), 200-208

Ngechu. M. (2004). Understanding the research process and methods. An introduction to research methods. Acts Press, Nairobi

Njeru, S. E (2015) Factors affecting effective implementation of Procurement Practices in tertiary public training institutions in Kenya. International journal of innovative research & development, 4, (12), 1-25.

Njeru, S.E. (2015). Factors affecting effective implementation of Procurement Practices in tertiary public training institutions in Kenya. Unpublished PhD Thesis. Jomo Kenyatta University of Agriculture and Technology

Nyaga N., & Kihara, A. (2017). Factors influencing implementation of procurement plans in public hospitals in Kenya; A Case of Kenyatta National Hospital. *The Strategic Journal of Business & Change Management, 4*(26), 445 - 460

Ogbadu, E. E. (2009). Profitability Through Effective Management of Materials. Journal of Economics and International Finance, 1(4), 099-105

Ogbo, G., & Ann, I. (2014). The impact of effective inventory control management on organisational performance: a study of 7up bottling company Nile Mile Enugu, Nigeria. Mediterranean Journal of Social Sciences, 5 (10)

Ondiek, G.O. & Odera, O. (2012). Assessment of Materials Management in Kenyan Manufacturing Firms. *Journal of Business Studies Quarterly, 3*(3), 40-49

Ombuki, K., Arasa, R., Ngugi, P., & Muhwezi, M. (2014). Determinants of Procurement regulatory compliance by Kenya public universities. Journal of supply chain Management, 10, (6), 132-134.

Onyinkwa, J. (2013). Factors influencing compliance to procurement regulations in public sector. Supply chain Journal 36, (9), 111-124.

Patel, H.A., Jayeshkumar, P., & Bhavsar, J.J. (2015). A Review on Material Management through *Inventory Management, Journal of International Academic Research for Multidisciplinary, 2*(12), 2320-5083.

Pauw, W. (2011). Public procurement practices in developing countries. Journal of supply chain Management, 44, (7), 46-48.

PPRA. (2012). Tanzania Procurement Journal Supplement, (2009) "Audit Report on the Assessment of the Implementation of Procurement Audit Recommendation" 11, (12), 40-45

Public Procurement Oversight Authority (PPOA, 2014).

PWC report, (2015)

Quek, A.H. (2013) Learning for the workplace: a case study in graduate employees' generic competencies, *J. Workplace Learning, 17* (4), 231-242

Rungtusanatham, M., Rabinovich, E., Ashenbaum, B., & Wallin, C. (2007). Vendor managed inventory. *Supply Chain Management, 16* (9), 144-174

Sanjeeve, A.S. (2014). Critical factors that influence e- procurement adoption success in the public sector, *Journal of Public Procurement, 6*(1), 70-99.

Segal, P & Summers, Y. (2012). Improving Transparency in Pharmaceutical Systems: Strengthening Critical Decision Points Against Corruption. Washington DC: World Bank, Human Development Network, Latin American and Caribbean Region, http://onlinelibrary.wiley.com/doi/10.1002/pam. 10053 (11th July,2016).

Simpson, M. & Powel, H. (2011). Benchmarking and the organization the performance, 18, (9), 138-142

Sindani, B. (2011). *The role of material management on performance of public organizations, a case study of East African Portland cement*. (Unpublished MSc thesis) JKUAT

Smith, K .(2010). *Purchasing and supplies chain Management*. (5th Ed). New Jersy: Pearson publishers.

Taiwo, O.A., Claudius, J.A, & James, M.U. (2012). Materials management: an effective tool for optimizing profitability in the Nigerian food and beverage manufacturing industry, *Journal of Emerging Trends in Economics and Management Sciences, 3* (1), 25-31

Thai, K.V. (2015). "Public procurement re-examined", Journal of Public Procurement, 1, (1), 9-50.

Thomson, J., & Jackson, T. (2013). Sustainable Procurement In Practice: Lessons From Local Government, Journal of Environmental Planning & Management, 50 (3), 421 -44.

Vian, M., & Collins, S. (2016). Paying for 'Free' Health Care: The Conundrum of Informal Payments in PostCommunist Europe. In: Transparency International. In: Global Corruption Report 2016: Special focus on Corruption and Health London: Pluto Press. 62 -71.

Wanjogu, H.K., Iravo, M., & Arani, W. (2015). Factors Affecting Materials Management: A Survey of Small and Medium-Sized Manufacturing Firms in Industrial Area Nairobi, *International Journal of Business and Change Management, 2* (69), 689-708

Wee, H. (2012). Corporate Ethics: Right Makes Might, Business Week, (quoting Stuart Gilman on Enron), No. 11 April.

World Bank (2013), Final Report: Preparation of Guidelines on How to Prevent Corruption in procurement, Retrieved on 28th May 2013, http://www1.worldbank.org/publicsector/anticorrupt/leadershipethics/Integrity%20Study%20FINAL%20REPOR T.pdf

Xingxing, Z. (2012). An agency theory perspective on supply chain quality management. Journal of Supply Chain Management, 31, (9), 111-116

Yong, Y.C., & Mustaffa, N.E. (2012). Analysis of factors critical to construction project success in Malaysia, *Engineering, Construction and Architectural Management, 19*(5), 543–556

Yuvenal, S. (2013) the management of issues which influence effective implementation of procurement plans in public organization: a case of government procurement services agency (gpsa) Unpublished Thesis, Mzumbe University Dar es salaam.

Zhang, D. (2010). Task Technology Fit and Individual Performance, *MIS Quarterly, 19*(2), 213-233