Int Journal of Social Sciences Management and Entrepreneurship 7(2): 185-199, 2023

ISSN 2411-7323 www.sagepublishers.com

INFLUENCE OF CONTRACT VARIATION MANAGEMENT ON PERFORMANCE OF STATE AGENCIES IN NAIROBI CITY COUNTY, KENYA

[1] Osoti Winnie Kemunto, [2] Dr. Namusonge Eric

[1] MSc. Scholar, Procurement and Logistics in Jomo Kenyatta University of Agriculture and Technology

[2] Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Kenyan state agencies play a great role in economic development through rural development, social welfare, and expanding basic needs particularly to the less privileged in the society. Productivity of state agencies is quite low while at the same time they continue to absorb excessive portion of the budget, becoming a principal cause of long-term procurement problems. Among the major challenges that are facing the state agencies are the long and time-consuming bureaucratic procedures. The purpose of the study was to examine the influence of contract variation management on performance of state agencies in Nairobi City County, Kenya. The study aimed to: assess the influence of cost management on performance of state agencies in Nairobi City County, Kenya and to determine the influence of delivery management on performance of state agencies in Nairobi City County, Kenya. The study was guided by descriptive research design. Descriptive statistics such as mean, frequencies and standard deviation will be used to analyze the data. The study also computed correlation and regression analysis to test the relationship between the study variables. The findings were presented in tables. Finding show that; there is a strong significant relationship between cost management and performance, and a strong significant relationship between delivery management and performance. The study recommends that the state agencies should invest in training their accountants to make them proficient management costs, agencies should allocate more funds to the transportation resources and improved ordering systems.

Key Words: Contract variation management, Performance, State agencies, Cost management, Delivery management

Background of the Study

The study sets out to investigate the influence of influence of contract variation management on performance of state agencies in Nairobi City County, Kenya. To this end, this chapter builds the case by introducing the problem warranting the study. This chapter presents; the background of the study, problem statement, objectives, research questions, importance of the study, and scope of the study limitations of the study. The design of any project should, in reality, be dictated by its response to the environment. Although it is best practice if all projects are fully planned, change in circumstances (in the operating environment) demands that flexibility must be maintained. Failure to respond to environmental forces can affect the suitability of the output the project hopes to produce (Hughes, 2019). Project measures, such as plans, processes, organization's contracts and information systems, should be ideally those that can function either in expected conditions or to changed conditions (Gilbreat, 2016). These measures should be designed to strike a balance between the need to be precise and firm while permitting flexibility.

In the public sector, projects are usually procured using standard forms of contract. Although the roots of standard forms in modern commercial practices can be traced back to contract law, there are differences between different projects. Some projects are conducted over a long time; they are not instantaneous one-off contracts. This creates problems as it is not possible to foresee or calculate adequately the impact of external forces on the process. Consequently, the suitability of the output is also affected. In the end, a sensible bargain may turn out to be onerous because of changed conditions (Bell, 2019). Adjustments are therefore necessary to reflect the changing circumstances that impinge the project execution process. However, the project manager is not obliged to accede to any request for change. Any departure from the work for which a project manager has agreed to do is subject to a new and separate agreement (Powell-Smith & Sims 2018, Murdoch & Hughes, 2018). Therefore, specific provisions are necessary to confer on the employer the right to vary the work and to avoid fresh negotiations over the terms of the contract every time a change is contemplated.

The term 'variation' refers to any type of deviation from the defined scope or schedule in the initial contract (Keane et al., 2010). According to CIDA/SBD/02 (2017), a variation may include changes to the quantities, quality, levels, positions and/or dimensions, omission or addition of any work and changes made to the sequence or timing of the execution of the Works. Within the context of a public sector contracts, the term "variation" is used to describe these changes. It means an alteration, whether by extra or omission, to the physical work content specified in the contract but which the contractor is required to perform (Dorter, 2017). The standard forms of contract produced by public institutions usually incorporate provisions to vary the work. Colledge (2018) stressed that it is more prudent to insert provisions to be followed in the future as it is impossible to complete all aspects of the contract before commencement.

These provisions not only contain detailed arrangements how the changes are to be made but also who will be vested the power to decide the changes (Atiyah, 2017). Parties are then able to adjust to future contingencies to secure the performance and continuation of the contract (de Lamberterie 2019). It would be reasonable to assume that variation clauses are designed for these purposes.However, the advantage of this flexibility has been largely overshadowed by reports that poor performance of the industry can be linked, either directly or indirectly, to variations. Variations have been described as the cause for disputes and/or conflicts (Gardiner & Simmons, 2018; Wood, 2047) partly because of delays (Bromilow, 2017; NEDO, 2018) and disruption (Banwell 2016; Irelan, 2017), subsequently leading to cost overruns. The falling rate of productivity has also been attributed to variations (Latham, 2018, Moselhi et al., 2019). Naturally, the response has been to devise strategies to prevent or limit occurrence of variations. These strategies are implemented early on the project, therefore reducing or even eliminating any impact from variation on the project execution process (Chan & Yeong, 2017). As highlighted by Chan and Yeong (2017), even the most thoughtfully planned project may necessitate changes due to various factors.

The construction industry in a developing country, Kenya being one of them, is a major contributor to the economic growth of the country, which makes use of human and physical resources while improving the economic efficiency of its processes (De Valence, 2019). However, changes or variations in contracts are common in modern construction projects (Onkar & Bhirud, 2015). These constant variations have an adverse impact on the public sector building projects in developing countries leading to time and cost overruns, work disruptions, conflicts and disputes (Mhando et al., 2018). The management of variations in a project can be enhanced by the identification and analysis of potential project variations as early as possible. Learning from these variations is imperative because the professionals can improve and apply their experience in the future. Owing to the importance of variation management towards project success, this study sought to establish the influence of contract variation management on performance of state agencies in Nairobi City County, Kenya.

Statement of the Problem

Kenya’s vision 2030 emphasizes the need for an appropriate economic pillar strategy for efficiency making the country globally competitive and a prosperous nation (World Bank, 2017). Nevertheless, most state agencies in Kenya operate at a technical efficiency of about 42% compared to their counterparts in Malaysia that average about 78% (KIPPRA, 2019) raising doubts about the state agencies’ capacity to meet the goals of vision 2030. Kenya’s state agencies are burdened by challenges such as misappropriation of the scarce resources, high cost of operations, unreliable vendors, low level technology utilization and declining trend of processes innovation (UNESCO, 2018). In addition, these institutions in Kenya have been experiencing a myriad of problems including low quality goods, overpriced procurement contracts and gross mismanagement (GoK, 2017).

The Kenya government has lost hundreds of millions of tax payer's money through canceled contracts, unfinished projects, poor service or product delivery, corruptions and extended contract periods in the last eight years without major improvement (Transparency international, 2019). Transformation index –Kenya (2018) reveals, Kenya spends between 10 percent -30 percent of Gross Domestic Product on procurement alone out of that 15% goes to waste due to lack of proper management of the contracts. The Systems Audit for State law Office (SLO), 2017/2018 Report revealed losses of Kshs 18 million through irregular procurements in financial year (FY) 2016/2017. Earlier, in FY 2014/2013, SLO had lost Kshs 8 million due to inefficiencies. This raises questions on the level of prudent contract management practices of SLO’s procurement system.

According to statistics from the World Bank (2013) there was a 42.7% drop in profits to Sh629 million from Sh1.64 billion a year earlier at Geothermal Development Company (GDC) and the public sector in general recorded a decline in performance. A report by Transparency International (2019) indicates that in some state agencies such as Kenya Electricity Generating Company (KenGen), the total operating expenditure increased by 52% compared to similar period in 2017. Although the country has recorded some improvements in the last years, productivity of state agencies is quite low while at the same time they continue to absorb excessive portion of the budget, becoming a principal cause of longterm procurement problems (Mwenda, 2019). Other challenges include long and time-consuming bureaucratic procedures (Nderu, 2017).

There are several studies related to contract management. In a study carried out by Rasheli (2017) on procurement contract management in the local government authorities (LGAs) in Tanzania found that costs procurement contract management incurred were associated with poor accountability and a lack of competition, transparency and efficiency throughout public procurement chain. Locally; Njiru (2017) carried out a study on performance contracting practices among NGO’s in the health sector in Kenya found that performance contracting practices had been adopted by NGO’s in the health sector in Kenya. Bakari (2018), carried out a study on procurement contracting practices and Service delivery of Government owned Entities in the Ministry of Transport and Infrastructure in Kenya and found that performance contracting had been implemented to a moderate extent. Obongo (2018) carried out a study on factors influencing performance contracting on delivery of conservation projects in Lamu County, Kenya. From the studies above, there exists a gap in knowledge based on the fact that there are few studies that have been carried out on contract management strategies and project performance at state agencies. Also, studies done have focused on contract management but not contract change management. It is against this backdrop that this study intended to examine the influence of contract variation management on performance of state agencies in Nairobi City County, Kenya.

Objectives of the Study

The main objective of the study was to examine the influence of contract variation management on performance of state agencies in Nairobi City County, Kenya

This study was guided by the following specific objectives;

i. To assess the influence of cost management on performance of state agencies in Nairobi City County, Kenya
ii. To determine the influence of delivery management on performance of state agencies in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Review

The Lean Theory

Lean theory was first introduced in the book The Machine That Changed the World (1991) by James P. Womack, Daniel T. Jones and Daniel Roos. Lean is a functional model which basically discounts the value of economies of scale and focuses on how to reduce costs as a result of small, incremental and continuous improvement. Lean operations have certainly become increasingly significant in cost management. Initially organizations involved in manufacturing of products used to involve themselves in lean manufacturing techniques, this has ceased as lean has expanded beyond manufacturing (Fawcett, Gregory & Mathew, 2008).

Lean operations law seeks to explain how organization should manage its procurement system and needs. It states that procurement can be used as a strategic differentiator by the organization and further goes on to say that not all procurement is about waste (Finch, 2014). The theory stated that procurement strategies developed by an organization should support the customer’s need and expectations. Procurement strategies should not be a driver on how much and when a product will be delivered to a customer, rather, the customers’ expectations should be understood and transport strategies is designed purposely to meet those expectation. Real savings can only be realized through day to day management and optimization of operations requirements variability. This therefore implies that cost associated with procurement cannot be achieved through inconsistent procurement network designs (Fisher, 2010). This theory is relevant to the study because cost management is a key component in effective and efficient project performance.

Resource Based Theory

Resource based theory is the study of how the resources of an organization affect the performance of the organization. The procurement of resources such as plant and equipment is a significant tenet of both the strategic and tactical management of any organization, an implication in the procurement efficiency of the sourcing firms especially in tapping into the connection with suppliers as their important and dependable associates through resources such as just in times systems of delivery (Reed, Bowman & Knipper, 2015). Thus, this theory props up the concept of asset utilization management, resource-based theory proposes that actors lacking in crucial resources will seek to create organizational policy with others in order to acquire required resources such as human capital resources. Just like sellers on buyers for precious markets and buyer will depend on suppliers for resources (Qu & Brocklehurst, 2013).

Also, organizations endeavor to alter their reliance relationships by lessening their own reliance or by increasing the dependence of other organizations on them. Within this viewpoint, organizations are viewed as coalitions alerting their structure and patterns of behavior to acquire and maintain required resources (Lacity, Willcocks & Rottman, 2008). Acquiring the resources required by an organization comes by diminishing the organization's reliance on others and by increasing other's reliance on it, that is, modifying an organization's influence with other organizations which in this case entails lowering ordering costs, avoiding stock out costs, credible supplier quality index and reducing ordering cost.

This theory emphasizes the firm's resources as the fundamental determinants of competitive advantage through forecasting the usage rate for stocks and its management (Busi & McIvor, 2008). The resource-based view is an efficiency-based explanation of performance differences. Gabbard (2014) explains that organizational performance is attributed to resources such as demand and supply forecasting techniques, credible supplier quality index and having intrinsically different levels of efficiency in the sense that they enable the firms to deliver to their customers at different performance levels.

This theory is relevant to the study because one thing depends on another thing to be effective. For better performance, services and products must be delivered on time to enhance service delivery.

Conceptual Framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Ahearne, Brackin & Kothari, 2010). Mugenda and Mugenda (2013) define a conceptual framework as hypothesized model identifying the model under study and the relationship between the dependent and independent variables.

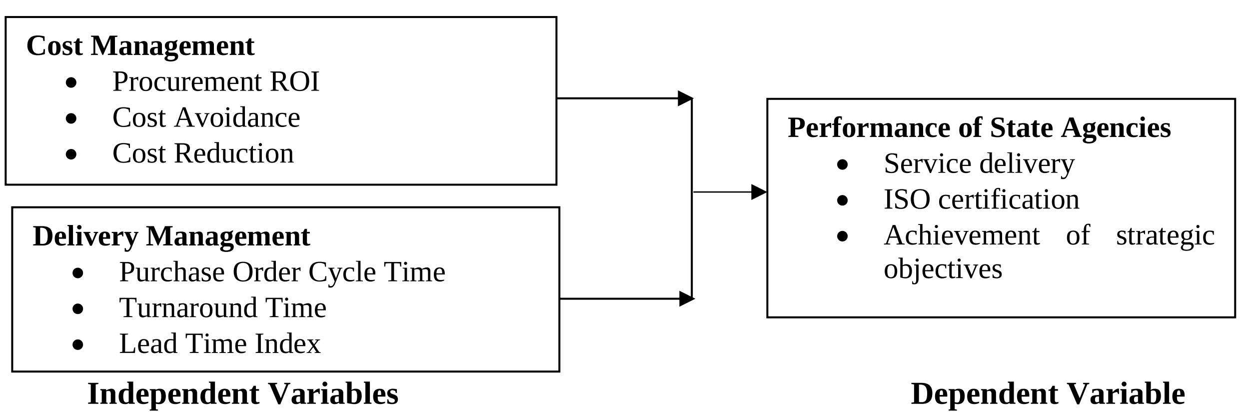

Figure 1: Conceptual Framework

Cost Management

Cost management in this study was considered as a contract variation management that influences performance of state agencies The attributes of cost management which will be taken into consideration in this study are: procurement ROI, cost avoidance and cost reduction. Cost management has received a great deal of attention as it integrates financial and nonfinancial performance measures to help organizations in the learning and improvement of their internal and external processes (Heinrich, 2018). Cost management has four perspectives: the innovative and growth perspective which measures how an organization improves and introduces new products, the internal business perspective which measures the effectiveness of the organizations processes, the customer perspective measures how the customer perceives the value created by the organization, while the financial perspective measures growth and return on investments provided by the organization to shareholders.

Cost management was developed to address weaknesses associated with traditional performance measurement systems including providing a holistic approach as it addresses both the financial and non-financial aspects unlike the traditional performance measurement tools. It is designed to help firms that have overemphasized on short term financial performance (Hatry, 2019). It tracks financial results as well as monitoring the process of building capabilities and acquiring assets for future growth. Prior traditional measurement systems cannot capture the measurements that are needed in the modern companies today. High quality services, intellectual capital, skilled employees and responsiveness are intangible assets that are important but cannot be captured in the balance sheet hence customers, shareholders and the management cannot know the real worth of a company (Hypko, 2019).

In addition, developing a world class performance measurement system hinges on a clear understanding of a firm`s competitive strategy, operational goals and the employee competencies required to achieve the firm`s objectives. Performance measurement systems can therefore only create value when they are matched with the firms' operational goals. Cost management aligns the performance measures with the objectives of the organization. According to Kaufmann (2017) the objectives and measures of cost management are consistent and mutually reinforcing rather than a collection of financial and non-financial measures that are unrelated.

Delivery Management

Delivery management in this study was considered as a contract variation management that may affect performance of state agencies. The attributes of delivery management which were taken into consideration in this study are: purchase order cycle time, turnaround time and lead time index. In a time of economic boom many firms, experience an increase in demand. When demand exceeds the available capacity, many firms tend to increase the order backlog by selling with longer lead times (Matanda & Ndubisi, 2019). Increased order lead times can cause issues with on time deliveries and thus customers are more likely to try alternative suppliers, and in the worst case even change the preferred supplier for an alternative one.

The loss of sales due to inadequate product or service delivery times is difficult to quantify with the existing system data. Even so, it is obvious that reduction of procurement cycle time means fewer inventories, less rework, higher quality, and fewer overheads, which ultimately has impact on the bottom line, as fewer costs the impact of time for a specific order line and item cannot be quantified with the rule of thumb (Ondieki & Oteki, 2017). Time is often a common aspect in sources of advantage when firms continually search for the elusive combination of resources and capabilities that yield differential financial performance (Rogers, 2018). A number of firms like AT&T, General Electric, Hewlett Packard, Northern Telecom, Toyota and Seiko have all recognized the importance of shorter delivery lead times in providing strategic advantage (Saeed, Malhotra & Grover, 2018).

In 2006, Northern Telecom discovered something important about their company. They found that all the things that were vital to their long-term competitiveness had one thing in common; time. Every improvement they wanted to make had something to do with squeezing time out of their processes. Suddenly, it was very clear that what they needed to do to satisfy their customer needs was the ability to do things faster (Alsaaty & Sawyer, 2016). Time as strategic competitive dimension emerged from manufacturing that dates back to the late 19th century, when Frederick Taylor proposed the use of time study to improve productivity. In his approach each job was divided into smaller elements, and each element had standard time, which was determined by time study experts (Balogun, 2017). Later, Henry Ford successfully embedded these techniques into his automotive assembly lines and developed the world's most efficient and timely system for producing cars (Artley & Stroh, 2017).

In the early 1980s, Toyota developed a system for producing small quantity production that eliminated waste and reduced costs. The success of this system introduced a revolutionary just-in-time (JIT) and automation with human touch concepts for manufacturing practices. In most business environments time can be argued to be one of the key characters and indicators of a company's success. It seems that companies need greater capabilities to respond more quickly to market dynamics and varying demand (Choi & Krause, 2018).

Performance of State Agencies

The attributes of project performance which was taken into consideration in this study are: profitability, market share and customer satisfaction. Procurement is a key function of any organization, public or private and in this era of globalization with the advent of entrepreneurial organizations, management of purchasing and supply in public sector has gained more prominence (Tukamuhabwa, 2018). Effective management of the function prevents the possibility of poor performance and when attributed to non-adherence to proper procurement processes and procedures; is an indicator of poor management of the procurement function (World Bank, 2017). Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and decided on its procurement requirement. Procurement continues through the process of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for property or services and where relevant, the ongoing management of a contract and consideration of options related to the contract (Weele, 2019). Therefore, effective management of the contract variation management function is a precursor to the performance of the system in achieving its intended objectives and that of the organization as a whole.

Performance standards when adopted can provide the decision-makers in the contract management department with unbiased and objective information regarding the performance of the procurement function. The evaluation or measurement of procurement performance has always been a vexing problem for procurement professionals (Agaba & Shipman, 2019). He asserts that traditionally, firms concentrate on analyzing their own internal trends which does not portray the true picture on how they compare well with competitors. Such an approach ignores what the competitors are doing. A firm does not wish to make known to its competitors how or what it is doing for obvious competitive reasons. This has been the case in the public sector where procuring entities have not been making available their procurement data due to the sensitive nature of the data. Alsaaty and Sawyer (2018) underscores these facts and concludes that one of the major setbacks in public procurement is poor procurement planning and management of the procurement process which include needs that are not well identified and estimated, unrealistic budgets and inadequacy of skills of procurement staff responsible for procurement.

Empirical Review

Cost Management and Performance of State Agencies

While Atkinson had shown as cited in Nzuve and Njeru (2017) that task difficulty, measured as probability of task success was related to cost management in a curvilinear inverse function with the highest level of effort occurring when the task was moderately difficult and the lowest levels occurring when the task was either very easy or very difficult. He did not measure personal performance goals. They found a positive linear function with the highest or most difficult goals producing highest levels of effort and performance. Performance leveled off or decreased only when limits of ability were reached or when commitments to a highest difficult goal lapsed (Mbua & Sarisar, 2017).

Letangule and Letting (2018) found that when goals are self-set, people with higher self-efficacy set higher goals than do people with lower self-efficacy. They also are more committed to assigned goals, find and use better task strategies to attain goals and respond more positively to negative feedback than people with low self-efficacy. Consequently, leaders can raise the self-efficacy of their subordinates by ensuring adequate training to increase mastery that provide success experiences, role modeling or finding models with whom the person can identify with and through persuasive communication that express confidence that a person can attain the goal (Kinanga & Partoip, 2017). Research in goal setting led to the development of high-performance cycle which explains how high goals lead to high performance, which in turn leads to rewards such as recognition and promotion. Rewards result in high satisfaction as well as high self-efficacy regarding perceived ability to meet future challenges through setting of even higher goals.

According to a study done by Obongo (2019), the key objectives for introducing cost management in the public service are: To promote responsiveness; improve efficiency by focusing resources on the attainment of key national policy priorities of government; institutionary of performance oriented culture in the public service; to measure and evaluate performance; linking rewards to measurable performance; competency development; to oversee the governance systems in public organizations; to allow for bench marking with the best practices; learning and innovation; stakeholder involvement and promote accountability.

The above objectives ensure that government organizations are working in harmony with regard to key policy areas like planning, budgeting, evaluation and measurement, reporting and management of public resources with a view to improving results. Cost management policy requires that each public entity must design and publish a citizen service charter, also known as the service delivery charter (GoK, 2018). The organization is then held accountable to implementing the contents of the charter and adhering to the commitments made to the public. This improves the responsiveness of public organizations to their customers' needs. Cost management requires that an organization's targets and goals are derived from its mission, vision and strategic objectives as outlined in the strategic plans which are aligned to the sectorial and nationwide government goals. This inter-linkage enables all the players and stakeholders to understand how individual and organizational objectives contribute to the achievement of national goals (GoK, 2019).

Delivery Management and Performance of State Agencies

The main strategy of time-based competition is to use speed for competitive advantage. The company uses this strategy to deliver product or services faster than the competitors (CIPS, 2018). 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.*, (2019) 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* (2018) argue that every quartering of time reduces costs as much as 20 percent.

The efficient use of time has been said to be one of the greatest indicators of competitiveness (Gianakis, 2016). It has been even claimed that firms that cut the lead times from their value-delivery systems experience remarkable performance improvements like reductions in cost. Some have even shown that lead time is correlated with financial performance indicators, such as ROI or average profit which underscores the importance of managing lead time (Holweg, 2018). As such, it is obvious that the development of a methodology to measure time as a performance indicator is increasingly important for a firm to compete in terms of time (Lazear, 2019).

Kusek *et al* (2018) indicated that a one-day faster delivery in the book industry brought a 0.5 percent price premium. Activities that shorten customer lead time may also have other beneficial effects for the firm. According to Liker *et al* (2019), firms that can use shorter lead times often yield a flexible manufacturing system that gives the company the capability to produce a much wider variety of products at little increase in overall costs, which can give companies in certain business environments the advantage in competition over their rivals. Semich (2019) argue that time-based competitors can offer greater varieties of products at lower costs and in less time than their more pedestrian competitors. Sylvia (2016) claimed that with time reduction firms are able to have greater cash flow, less inventory, quicker customer response, and ultimately greater profits. Pal *et al* (2017) performed a study which reveals that companies that reduced lead time by 50% produced on average a 25% reduction in overall product cost (2:1 lead time/cost ratio). James *et al* (2019) showed that reducing response time by 50% resulted in a 20% cost reduction.

RESEARCH METHODOLOGY

The research was conducted using a descriptive research method. Descriptive research method is chosen because it provides answers to questions such as what, who, where, when and how they are related to the problems. To gather the information required, the target population comprised all the 141 state Agencies in Kenya (SCAC, 2021) which was the unit of analysis. The study unit of observation was 141 procurement heads of the state agencies spread over different locations in Nairobi. Nairobi city county is selected since it's the headquarters of the state departments where the management staff operate from. Therefore, the data collection was centralized to one geographical area. The study used stratified random sampling technique where the subjects were selected in such a way that the existing subgroups in the population are more or less reproduced in the sample (Kothari, 2014). Using the Yamane formula, the sample size for this study was 104 state agencies.

Both quantitative and qualitative data was collected in this study. Data was collected mainly through questionnaires. The questionnaires were pilot tested in 16 procurement and supply chain heads. This represented 10% of the study sample (Mugenda, 2008). The pilot test was done to ensure that the data collection instruments was suitable for collection of data. The collected data was analyzed quantitatively and qualitatively. In analyzing the qualitative data, the study used descriptive statistics using Statistical Package for Social Sciences Version 26. The Pearson correlation coefficient is a correlation coefficient that in this study was used to indicate one on one association between each of the independent variable to the dependent variables which is set out in the objectives of the study. Multiple regression analysis is adopted when the study has one dependent variable which is assumed to be a function of two or more independent variables.

RESEARCH FINDINGS AND DISCUSSIONS

Questionnaires were administered to 149 managers and 94 answered the questionnaires. This shows that the response rate for the study was 65.8%. Mugenda and Mugenda (1999) asserted that a response rate of 50% is adequate for analysis and reporting, a rate of 60% is generally good while a response rate of above 70% is excellent. Similarly, Mugo (2010) asserted that a response rate of above 60% is deemed to be very good. The high response rate was achieved as a result of researcher's effort to closely monitor the data collection process.

Cost Management

This first objective focused on the influence of cost management on performance of state agencies in Nairobi City County, Kenya. Respondents were asked to tick on the extent to which they agree/disagree with statements related to cost management. Findings are shown in Table 1.

Table 1: Cost Management

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Procurement ROI plays a significant role in profitability	0	0	22	22.4	6	6.1	12	12.2	58	59.2	4.08
Cost avoidance plays a significant role in profitability	9	9.2	9	9.2	6	6.1	15	15.3	59	60.2	3.72
Cost reduction plays a significant role service delivery	14	14.3	3	3.1	9	9.2	31	31.6	41	41.8	3.84
Procurement ROI plays a significant role in attaining higher market share	0	0	10	10.2	9	9.2	31	31.6	48	49.0	3.91
Cost avoidance plays a significant role in attaining higher market share	10	10.2	6	6.1	3	3.1	37	37.8	42	42.9	3.97
Cost reduction plays a significant role in attaining higher market share	0	0	0	0	9	9.2	34	34.7	55	56.1	4.53
Procurement ROI plays a significant role in improving customer satisfaction	6	6.1	6	6.1	6	6.1	12	12.2	68	69.4	4.33
Cost avoidance plays a significant role in improving customer satisfaction	10	10.2	12	12.2	4	4.1	20	20.4	52	53.1	4.29
Cost reduction plays a significant role in improving customer satisfaction	10	10.2	3	3.1	9	9.2	12	12.2	64	65.3	4.06

Findings show that majority of the respondents strongly agreed that; cost reduction plays a significant role in attaining higher market share (m=4.53), procurement ROI plays a significant role in improving customer satisfaction (m=4.33), and cost avoidance plays a significant role in improving customer satisfaction (m=4.29). The managers also agreed that; procurement ROI plays a significant role in profitability (m=4.08), cost reduction plays a significant role in improving customer satisfaction (m=4.06), cost avoidance plays a significant role in attaining higher market share (m=3.97), procurement ROI plays a significant role in attaining higher market share (m=3.91), cost reduction plays a significant role service delivery (m=3.84), and cost avoidance plays a significant role in profitability (m=3.72).

Results imply that cost management enhances performance of the state corporations. Effective management of costs helps to attain high profitability and proper utilization of available resources. Controlling costs can increase productivity, reduce cost, and improve quality of services delivered. Results agree with Obongo (2019) that the key objectives for introducing cost management in the public service are to ensure that government organizations are working in harmony with regard to key policy areas like planning, budgeting, evaluation and measurement, reporting and management of public resources with a view to improving results. Cost management influence performance of the state agencies in Kenya. Respondents were also asked to rate the cost management system implemented in the state agency. Findings are presented in Table 2.

Table 2: Effectiveness of Cost Management System

Effectiveness	Frequency	Percentage
Very Effective	12	12.2
Effective	30	30.7
Somehow Effective	49	50.0
Ineffective	7	7.1
Total	**98**	**100.0**

Results show that half of the managers (50%) opine that cost management system implemented in the state agency are somehow effective, 30.7% consider them effective, 12.2% very effective, and 7.1% opine that the cost management systems are ineffective. Respondents also added that cost management is not very effective. There is misappropriation of funds in the agencies. Some of the funds allocated are not used effectively. There are some loopholes in the systems that is used for fraud activities. The managers' opinion shows that costs in the cost agencies are not managed effectively.

Delivery Management

The third objective sought to determine the influence of delivery management on performance of state agencies in Nairobi City County, Kenya. Respondents were asked to tick on the extent to which they agree/disagree with statements related to delivery management. Findings are shown in Table 3.

Table 3: Delivery Management

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Purchase order cycle time plays a significant role in profitability	6	6.1	12	12.2	3	3.1	12	12.2	65	66.3	4.20
Turnaround time plays a significant role in profitability	14	14.3	6	6.1	6	6.1	15	15.3	57	58.2	3.97
Lead time index plays a significant role in profitability	17	17.3	9	9.2	3	3.1	15	15.3	54	55.1	3.82
Purchase order cycle time plays a significant role in attaining higher market share	14	14.3	6	6.1	3	3.1	34	34.7	41	41.8	3.84
Turnaround time plays a significant role in attaining higher market share	7	7.1	12	12.2	3	3.1	15	15.3	61	62.2	4.13
Lead time index plays a significant role in attaining higher market share	4	4.1	6	6.1	3	3.1	12	12.2	73	74.5	4.47
Purchase order cycle time plays a significant role in improving customer satisfaction	13	13.3	3	3.1	6	6.1	18	18.4	58	59.2	4.07
Turnaround time plays a significant role in improving customer satisfaction	6	6.1	10	10.2	3	3.1	12	12.2	67	68.4	3.73
Lead time index plays a significant role in improving customer satisfaction	12	12.2	6	6.1	6	6.1	32	32.7	42	42.9	4.12

Findings show that the managers strongly agreed that lead time index plays a significant role in attaining higher market share (m=4.47). The further agreed that; purchase order cycle time plays a significant role in profitability (m=4.20), turnaround time plays a significant role in attaining higher market share (m=4.13), lead time index plays a significant role in improving customer satisfaction (m=4.12), purchase order cycle time plays a significant role in improving customer satisfaction (m=4.07), turnaround time plays a significant role in profitability (m=3.97), purchase order cycle time plays a significant role in attaining higher market share (m=3.84), lead time index plays a significant role in profitability (m=3.82), and turnaround time plays a significant role in improving customer satisfaction (m=3.73).

Findings imply that delivery management influence performance of the state corporations. Timely delivery ensures that stock doesn't run out and operations are carried out effectively which enhances service delivery. Time taken to order and deliver products may help to attain higher market share since the clients tend to have more faith in companies that honour delivery time and has efficient and reliable ordering systems. Results concurs with Sylvia (2016) who claimed that with time reduction firms are able to have greater cash flow, less inventory, quicker customer response, and ultimately greater profits.

Respondents were also asked to rate the delivery management structure implemented in the state agency. Findings are presented in Table 4.

Table 4: Effectiveness of Delivery Management Structure

Effectiveness	Frequency	Percentage
Very Effective	9	9.2
Effective	24	24.5
Somehow Effective	51	52.0
Ineffective	14	14.3
Total	**98**	**100.0**

Results show that 52% of the managers opine that delivery management structure implemented in the state agency are somehow effective, 24.5% consider them effective, 14.3% ineffective, and 9.2 % opine that delivery management structure are very effective. The managers also added that while some products are delivered on time, others are delayed. There is a challenge in transportation of some products leading to stock outs. Order processing is also not very effective and it takes time to process some orders hence late delivery. However, timely delivery enhances performance of the state agencies.

Performance of State Agencies

In order to measure performance of the state corporations, the department heads were asked to rate the performance based on various parameters. Results on performance are presented in Table 5.

Table 5: Performance of State Agencies

Statements	Very low		Low		Moderate		High		Very high		M
	F	%	F	%	F	%	F	%	F	%	
Service delivery	16	16.3	3	3.1	64	65.3	9	9.2	6	6.1	3.11
ISO Certification	10	10.2	12	12.2	9	9.2	3	3.1	64	65.3	3.99
Achievement of strategic goals	35	35.7	16	16.3	21	21.4	12	12.2	14	14.3	2.53
Staff productivity	15	15.3	51	52.0	12	12.2	6	6.1	14	14.3	2.36

Results show that the managers indicated that service delivery is moderate (m=3.11), ISO certification is high (m=3.99), there is low achievement of strategic goals (m=2.53), and low staff productivity (m=2.36). Findings imply that although majority of the state corporations are ISO certified, service delivery is not very satisfactory, there is poor service delivery, and strategic goals are not always achieved. Results concur with Mwenda (2019) that although the country has recorded some improvements in the last years, productivity of state agencies is quite low while at the same time they continue to absorb excessive portion of the budget, becoming a principal cause of long-term procurement problems.

Inferential Statistics

Correlation

Correlation indicates the strength and significance of the relationship between the study variables. Correlation findings are presented in Table 6.

Table 6: Coefficient of Correlation

Variables		Performance	Cost management	Delivery management
Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Cost management	Pearson Correlation	.627**	1	
	Sig. (2-tailed)	.000		
Delivery management	Pearson Correlation	.809**	.425**	1
	Sig. (2-tailed)	.000	.000	

**. Correlation is significant at the 0.05 level (2-tailed).

Finding show that; there is a strong significant relationship between cost management and performance (r=0.627, p=0.003), a strong significant relationship between delivery management and performance (r=0.809, p=0.000). The findings show that there is a significant relationship between contract variation management and performance of state agencies projects in Nairobi City County, Kenya. Findings agree with; Nzuve and Njeru (2017) that there is a positive relationship between cost management and performance, and Holweg (2018) that lead time is correlated with financial performance indicators

Regression Analysis

Regression analysis was conducted to understand how a unit change in the independent variables may cause a change in the dependent variable. The coefficient of determination shows how a statistical model is expected to predict future results. Table 7 presents the Model Summary.

Table 7: Model Summary

Model	R	r^2	Adjusted r^2	Std. Error of the Estimate
1	0.890	0.792	0.783	.711

Predicators: (constant) cost management, delivery management,

Table 7 show R^2 value of 0.792 meaning 79.2% of performance of state corporations is caused by cost management and delivery management, meaning that other variables that are not part of the current study contributes to 20.8% changes in performance of the state corporations. An analysis of variance was performed on the relationship between independent variables and dependent variable. ANOVA results are presented in Table 8.

Table 8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	178.758	4	44.690	88.280	.000^b
	Residual	47.079	93	.506		
	Total	225.837	97			

Results show that regression model had an F value of 88.280 (p= 0.000). The significance value of 0.000 indicates that the regression relationship is highly significant in predicting how contract management practices would cause changes in performance of the state corporations. The F calculated is greater than 1 showing that the overall model is suitable for running a regression analysis.

Multiple regression shows how a change in the independent variable would predict a unit change in the dependent variable. Table 9 presents the regression coefficients.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant/Y Intercept	5.603	.410		13.678	.000
Cost management	.602	.079	.505	7.601	.000
Delivery management	.820	.064	.729	12.807	.003

Results show that;

Performance of state agencies = 5.603 + 0.602 (cost management) + 0.820 (delivery management)

Findings also shows that a unit increase in cost management results in a 0.602 change in performance of state agencies, a unit increase in delivery management results in a 0.820 change in performance of state agencies. Findings further show that delivery management had the greatest influence on performance of agencies (12.807), followed by cost management (7.601). All the variables had causes a significant change on performance of state corporations ($p<0.05$).

Conclusion

The researcher was able to achieve the study objectives whereby the she established that cost management delivery management influence performance of state agencies in Nairobi City County, Kenya. However, the extent to which these variables influenced performance of state agencies differed. Adoption of cost management by the state agencies has a high potential of improving performance and hence better utilization of public funds. Since the ultimate goal of a company is making more returns on investments, cost management practices enable to achieve the target.

Effective delivery management helps an organization to keep proper records on transport budget and ensures timely delivery of products. If a firm has a fleet of delivery trucks, time is not wasted in case of a mechanical problem of the delivery vehicles. The logistics manager can easily their fleet and ensure that there is no delay in delivery. Lead time ensures that there is no stock run out and efficiency in operations and delivery of services is enhanced. Evaluating the competence of suppliers enhances performance.

Recommendations

Based on the study findings, the Study recommends that; The state agencies should invest in training their accountants to make them proficient management costs. This will ensure that the resources are used efficiently to achieve higher returns on investments.

The agencies should work improve on the delivery management to enhance lead time. This may be achieved through allocating more funds to the transportation resources and improved ordering systems. This will make it easier to order goods from the suppliers and also to deliver services from the citizens who requires services of the state agencies.

Areas for Further Study

A similar study should be conducted in the private sector for comparison purposes as this study was done on state agencies in Kenya. Additionally, a similar study can be undertaken with different variables pertaining to contract variation management

REFERENCES

Atiyah, P .S. (2017). *An introduction to the law of contract (5th. edition)*. Oxford: Clarendon Press.

Banwell, H. (2016). *The placing and management of contracts for building and civil engineering works: report of the committee*. London, HMSO.

Bell, J. (2019). The effect of changes in circumstances on long-term contracts: english report. In: Harris, D. and Tallon, D. (eds.) *Contract Law Today*. Oxford: Clarendon Press.

Bromilow, F.J. (2017). The nature and extent of variations to building contracts. *The Building Economist*, 9(3), 93-104, 112.

Chan, A.P.C. & Yeong, C.M. (2017). A comparison of strategies for reducing variations. *Construction Management and Economics*, 13, 467-473

Colledge, B. (2018) Construction contracts: towards a new relationship. In: Fenn, P. and Gameson, R. (eds.) *Construction conflict management and resolution*. London: E. & F.N. Spon

de Lamberterie, I. (2019) The effect of changes in circumstances on long-term contracts: French report. In: Harris, D. and Tallon, D. (eds.) *Contract law today*. Oxford: Clarendon Press

De Valence, G.: (2019). Reframing construction within the built environment sector, Engineering, *Construction and Architectural Management*, 26(5), 740-745

Dorter, J. (2017) Variations. *Construction Law Journal*, 7, 281-302.

Gianakis, G. (2016). "*The promise of public sector performance measurement: anodyne or placebo?"* Public Administration Quarterly, 5(3), 26-43.

Hall, J. (2018). Environmental Supply Chain Dynamics. *Journal of Production and Operation Management*, 44(9), 143-147.

Hatry, H. (2019). *Performance Measurement:* Getting Results. 2nd ed. Washington, DC: The Urban Institute.

Hughes, W.P. (2019). *Organizational analysis of building projects. Unpublished Ph.D. dissertation*. Liverpool Polytechnic.

Hypko, P., (2019). "Clarifying the concept of performance-based contracting in manufacturing industries: a research synthesis*", Journal of Service Management,* 2(1), 5-22.

Ireland, V. (2017). The role of managerial actions in the cost, time and quality performance of high-rise commercial building projects. *Construction Management and Economics*, 3, 59-87.

KIPPRA (2019). *The Demographic Governance Support Programme* (DGSP). Nairobi: KIPPRA.

Kothari, C.R. (2014). *Research Methodology; Methods & Techniques (2nd ed.)*. New Delhi; New Age International Press Limited.

Kusek, J., & Rist, C. (2018). *Ten Steps to a Results-based Monitoring and Evaluation System: A Handbook for project managers*. World Bank Publications.

Latham, M. (2018). *Constructing the team: final report of the government/industry review of procurement and contractual arrangement in the UK construction in*dustry. London: HMSO

Mbua, M. & Sarisar, K (2017). "Inventory in Accuracy and Performance of Collaborative Supply Chain Practices", *Journal of Industrial Management and Data Systems*, 2(4), 108-123.

Moselhi, 0., Leonard, C. and Fazio, P. (2019) Change orders' source and impact. In: Ireland, J.I., Cheetham, D., Miller, D. and Soderberg, J: (eds.) CIB 90 *Building Economics and Construction Management*, 6, 323-334

Mugenda, O.,. (2014). *Research methods quantitative and qualitative approaches.* Nairobi: Acts Press.

Murdoch, J. & Hughes, W. (2018). *Construction contracts: law and management (1st edition)*. London: E. & F.N. Spon.

Mutua, C. & Juma, D. (2018). Influence of Strategic Sourcing on Procurement Performance of Kenyan Commercial Banks. *The Strategic Journal of Business & Change Management*, 5(2) 1415 – 1445

Mwenda, M.M. (2019). *Application of business process outsourcing strategy in small and medium food manufacturing firms in Kenya*: University of Nairobi, Nairobi, Kenya.

Nderu, M. (2017). Influence of Survival Strategies on the Organizational Performance of Kenya Airways, *International Journal of Social Sciences and Entrepreneurship,* 1(2), 496-512.

Nedo (2018). *Faster building for industry*. London: HMSO.

Onkar, J. & Bhirud, A.N. (2015). Review analysis on causes and effects of change orders on construction projects, *International Journal on Recent and Innovation Trends Computing and Communication*, 3(4), 2230-2233

Oso, Y., & Onen, D. (2019). *A general Guide to Writing Research Proposal and Report*. Kisumu: Options Printers and Publishers.

Powell-Smith, V. & Sims, J. (2018). *Building contract claims*. London: Granada.

Transparency International (2019). *The Kenya Public Procurement Sector Integrity Study Report*, Nairobi: Transparency International.

UNESCO (2018). *Global Monitoring Report: The Role of the Organization and Social Context of Public Procurement*. http://portal.org/education.

World Bank (2017). "*Standard Bidding Documents: Procurement of Work*s", Washington, D.C: World Bank