ABSTRACT

A large body of literature underscores the impact of contract management on supply chain performance from diverse contexts. Although the concept of contract cost management and supply chain performance has extensively been researched from the Kenyan context, most of the studies have zeroed in on manufacturing supply chains. Therefore, the study seeks to establish the relationship between contract cost management and supply chain performance of county referral hospitals in Kenya. The study is anchored on transactional cost economies theory. The study employed a descriptive research design and mainly concentrated on the forty-seven county referral hospitals in Kenya. In order to meet the research objective, the respondents were chosen based on the sample frame. The heads of department in each of these departments: procurement, finance, and stores were employed as a unit of observation across the referral hospitals. The pilot study targeted 10 respondents which is 10% of the final study sample size of who were randomly selected in each of the firms. The primary data were collected through a self-administered questionnaire that had both open and closed ended questions, designed to obtain definite responses. Statistical Package for the Social Sciences (SPSS version 28) was used to analyze the data and present the variables through coding and summarizing the responses of all the respondents and the analyzed data was presented in form of tables. The Cronbach’s Alpha value was greater than 0.7 which indicated that the questionnaire met the minimum acceptable threshold. The study findings showed that contract cost management significantly influence the supply chain performance of county referral hospitals in Kenya. The study concluded that performance was predicted to improve for every unit increase in these practices. The study further recommends that county referral hospitals should implement electronic document management systems for contract documentation, streamlining processes, and improving overall efficiency. Some recommendations included through choosing right software, systems configuration, document importation, user training, and need identification.

Keywords: Contract Cost Management, Supply Chain Performance

APA CITATION;

1.0 INTRODUCTION

1.1 Background of the Study

The ability to effectively manage costs is fundamental to the success of any organization, especially when it comes to supply chain performance (Wisner, Tan & Leong, 2021). Firstly, let’s explore the concept of cost budgeting. According to Steiss (2019), cost budgeting involves the process of estimating and allocating resources to various activities within a project or organization. It serves as a roadmap for financial planning and helps ensure that resources are allocated in a manner that aligns with the strategic objectives of the organization. By setting a clear budget, organizations can monitor and control costs, making informed decisions throughout the project lifecycle (Wisner et al., 2021). The inclusion of cost budgeting as an indicator in contract management research allows for a comprehensive analysis of how effective budgeting practices impact supply chain performance.

According to Sanchez and Terlizzi (2017), cost management systems refer to the tools and processes used to track, monitor, and control costs associated with contracts or projects. These
systems provide organizations with valuable insights into their financial performance by capturing data on expenses, revenue, and other key financial metrics. By implementing robust cost management systems, organizations can effectively track their budget, identify cost overruns or inefficiencies, and take corrective actions in a timely manner (Sanchez et al., 2017). Including cost management systems as an indicator in research allows for an evaluation of how different systems contribute to improved contract cost management and ultimately enhance supply chain performance.

Moreover, cost control refers to the process of managing and reducing costs to ensure they remain within the allocated budget (Simons, 2019). It involves monitoring expenses, identifying areas of potential savings, and implementing strategies to mitigate any cost overruns. Effective cost control measures can lead to improved financial performance, increased profitability, and enhanced overall supply chain performance. By examining the role of cost control in contract management, researchers can gain insights into how organizations can optimize their cost management processes and achieve better outcomes (Li, Wu, Holsapple & Goldsby, 2017). Contract cost management is a critical variable that impacts supply chain performance. By exploring indicators such as cost budgeting, cost management systems, and cost control, researchers can gain valuable insights into how organizations can effectively manage costs throughout the contract lifecycle. These indicators provide a comprehensive framework for understanding the relationship between effective contract cost management and supply chain performance (Li et al., 2017). By focusing on these variables, organizations can enhance their financial performance, optimize resource allocation, and ultimately achieve greater success in their contractual endeavors.

According to Abolbashari, Chang, Hussain and Saberi (2018) procurement performance refers to a measure of ascertaining the extent to which the procurement role is capable to meet the goals of procurement at a minimum cost. Procurement performance considers cost efficiency, quality improvement, reduced lead time and effective inventory accountability (Coviello, Guglielmo & Spagnolo, 2018). Measuring procurement performance is important as the procurement function plays an ever increasingly important role in the supply chain in an economic downturn (Patrucco, Luzzini & Ronchi, 2016). Performance measurement is the process of developing specific measurable indicators against which performance can be systematically tracked in order to assess progress towards the achievement of goals and objectives (CIPS, 2012).

Procurement excellence is increasingly becoming an important factor in delivering efficient operations within successful companies. During a downtime when companies must consider every avenue for cutting costs in order to simply survive, the procurement department plays an increasingly important role in achieving this strategic goal (O'brien, 2019). For any organization to change its focus and become more competitive (Hamza, Gerbi and Ali, 2017) suggests that performance is a key driver to improving the quality of services while its absence or use of inappropriate means can act as a barrier to change and may lead to deterioration of the purchasing function. Organizations that do not have performance means in their processes, procedures, and plans experience lower performance and higher customer dissatisfaction as well as employee turnover (Lee, 2018).

In order to measure and control the procurement process so as to improve it, it has to be mapped properly (Deasy, Rahmat & Ketut, 2019). A suitable way to govern purchasing is through target setting and measuring. This could be done through key performance indicators (KPI). Having KPIs is important because it states performance goals in a way that it is capable of direct detailed, consistent measurement at operational level, using available data collection systems. KPIs are monitored, reviewed and reported on at regular intervals to ensure that the organization project is on track in relation to its most important yardsticks of success (CIPS, 2012). KPI is divided into seven categories, namely: price-related KPI, quantity-related, delivery-related, inventory-related,
saving-related KPI, activity-related KPI, and many others. An obvious performance measure of the success of any purchasing department is the amount of money saved by the company (Wahu, Namusonge, Mungai & Chilion, 2017).

1.2 Statement of the Problem

The Kenya Health Sector plays a critical role in providing healthcare services in alignment with the health standards set forth in the Kenya Health Policy, 2014-2030. Supported by international partners such as USAID, the World Bank, UNICEF, and DANIDA, the sector has undergone numerous reforms to address persistent challenges in the healthcare supply chain. These reforms aim to enhance the sector's ability to honor contractual obligations, manage unpredictable financing, and ensure the consistent availability of medical commodities (Gichuki, 2021; Snyder, Maslow & Dadush, 2021).

Despite these efforts, county referral hospitals in Kenya continue to face significant challenges in contract cost management. These challenges include pre-qualification issues, competitive bidding difficulties, warehousing problems, quality assurance failures, customs clearance delays, and over-invoicing and under-invoicing of imports. Local procurement inefficiencies and inappropriate fund usage further complicate the effective implementation of the Public Procurement Act. Problems such as a lack of competent workforce, corruption, poor-quality goods and services, unfinished projects, and non-compliance with supply chain principles significantly hamper supply chain performance in these institutions (Mkhize, 2023; Mwangi, 2020). The persistence of these problems, despite existing reforms and systems, indicates the need for more robust and effective contract management systems. Transparency International (2009) reported substantial financial losses due to canceled contracts, incomplete projects, poor service delivery, corruption, and extended contract periods without significant improvement. These inefficiencies have led to severe economic repercussions, necessitating interventions by the World Bank and IMF, which have further slowed economic development (Kamau, 2012; Kalogiannidis, 2021).

Research on contract cost management and supply chain performance in Kenya has primarily focused on sectors such as manufacturing, state corporations, and county governments (Lesere et al., 2018; Myra & Makori, 2021; Sikuku et al., 2018; Kingoto & Ismail, 2021; Mwendwa & Onchiri, 2019). However, there is a notable lack of studies specifically addressing the health supply chain. Existing studies have predominantly examined contract management stages like relationship contract cost management, without delving into the impact of contract management metrics such as efficiency, effectiveness, value, and risk (Lesere, 2018; Myra & Makori, 2021). Furthermore, methodological limitations in previous research, such as the preference for cross-sectional designs and descriptive research approaches, have not adequately captured the causal relationships or the temporal and entity differences in the healthcare supply chain. For a comprehensive understanding of contract cost management and its impact on healthcare supply chain performance, it is essential to employ proper measurable metrics and robust research designs.

Therefore, this study seeks to address these gaps by examining the contract cost management practices in county referral hospitals in Kenya, with a focus on identifying and evaluating the effectiveness of contract management metrics and their impact on the performance of the healthcare supply chain. This research aims to provide insights that can inform the development of more effective contract cost management and contribute to the overall improvement of healthcare service delivery in Kenya.

1.3 Objective of the Study

i). To examine the effect of contract cost management on the supply chain performance of

county referral hospitals in Kenya.

1.4 Research Hypotheses
i). H₀₁: Contract cost management does not have significant effect on the supply chain performance of county referral hospitals in Kenya.

1.5 Scope of the Study
The research study concentrated on contract cost management metrics, with specific reference to the supply chain performance in county Referral hospitals in Kenya. The study focused on all 47 county referral hospitals in Kenya. This study was also supported by the damning audit report for the financial year 2022/2023, which revealed that a considerable chunk of the monies is paid to unscrupulous workers or fictitious firms and non-existence suppliers in devolved county governments. The study also targeted a population of 3 department namely; procurement and finance departments and store department with a total of 141 as the primary respondents in the county Referral hospitals in Kenya. These departments are deemed to have relevant information regarding public procurement because procurement is bestowed with the responsibility of acquiring goods, services, and works on behalf of the devolved county governments. On the other hand, finance is responsible for allocating finance and paying the cleared invoices of suppliers. The stores department was involved because it plays a crucial role in ensuring efficient management of medical supplies, equipment, and other resources necessary for the functioning of the hospital. The department is responsible for storing all supplies and equipment in a secure and organized manner. They ensure that items are stored according to their specific requirements to maintain their quality and integrity. Additionally, they oversee the distribution of supplies to different departments within the hospital as per their needs and requests. The study was anchored on transactional cost economics theory

2.0 LITERATURE REVIEW

2.1 Theoretical Review
The theoretical frame work for the study was formed on transaction cost theory. The transaction cost theory was proposed by Williamson in 1979 and reviewed in 1986. The theory postulates that the minimization of exchange costs is a function of economic efficiency facilitated by an optimum organizational structure. The theory argues that coordination costs of monitoring, controlling, and managing transactions depend on the type of transaction (Cuypers et al., 2021). The TCE focuses on the contract's total cost as opposed to the cost of one element. It subsumes the cost of finding suppliers (search and information costs), negotiating with suppliers (bargaining costs), and managing the contract (policing and enforcement costs). Consequently, factoring these activities into the business contract will make a sounder decision.

Evidence has shown the employment of the principals TCE to align contracts through e-tenders, templates, and standard contracts. However, these have sometimes occasioned cumbersome bidding processes and one-sided, opaque template contracts. Consequently, the agents' TCE has often eroded cost savings (Sayed et al., 2021). Given the hidden nature of transaction costs between providers and buyers, TCE seeks to reduce such costs if they lack a return on investment. Therefore, TCE is a theory that pursues exchange relationships defined in contracts and efficient governance of transactions (Ketokivi & Mahoney, 2020). Transaction cost economics (TCE) was underpinned contract cost management. TCE is chosen for this purpose because TCE is well placed to answer questions regarding components to make in-house, co-produce, and what to outsource. Research has shown that leveraging TCE enables optimization in the governance of a complex contractual relationship to create transaction value and avoid waste (Ketokivi & Mahoney, 2017). By opting for TCE, the researcher recognizes the heterogeneity involved in transactions and the diversity of organizations. Therefore, the TCE is likely to lead to the understanding of discriminating alignment in the case of the healthcare supply
2.2 Conceptual Framework

<table>
<thead>
<tr>
<th>Contract Cost Management</th>
<th>Supply Chain Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Budgeting</td>
<td>Responsiveness</td>
</tr>
<tr>
<td>Cost Management Systems</td>
<td>Cost of Operations</td>
</tr>
<tr>
<td>Cost Control</td>
<td>Efficiency</td>
</tr>
</tbody>
</table>

**Figure 2.1: Conceptual framework**

2.3 Empirical Review

The cost element in contract management is basically divided into two; namely: labor costs; and material costs. There are usually two types of costs that cannot be separated or lumped together, which are the costs incurred by the human resource department and the day-to-day operations of the organization (Dumas et al., 2018). Normally, labor costs are recurring and predictable for most organizations, so proper preparation is required to handle such tasks. Material costs and operations are not normally forecasted as they may increase or decrease according to the budget depending on other external factors such as inflation and general shortage of goods and services in the market (Moradi, Appolloni, Zimon, Tarighi & Kamali, 2021). Effective contract management will allow the organization to record such increases and create a proper budget. Contract administration is an administrative activity related to the management of a contract, which is divided into several things, such as: invitation to tender for contracts; bid evaluation; order entry, order execution; performance measurement work has been completed; calculation of payments including solving related problems; incorporating necessary changes or modifications into the contract, ensuring that both parties meet or exceed their expectations, and actively communicating with the supplier to achieve contract goals (Moradi et al., 2021).

Several empirical studies have been conducted to examine the relationship between contract cost management and supply chain performance. One such study by Cousins, Lawson, Petersen & Fugate (2019) explored the impact of contract cost management on overall supply chain efficiency. The findings of this study revealed a positive correlation between effective contract cost management practices and improved supply chain performance. Specifically, organizations that were able to effectively manage and control costs associated with their contracts experienced higher levels of productivity and profitability. Another study conducted by Kırılmaz et al. (2017) examined the role of contract cost management in reducing supply chain risks. The researchers found that organizations that implemented robust contract cost management strategies were better equipped to identify and mitigate potential risks within their supply chains. This, in turn, led to improved overall supply chain performance and reduced disruptions. Additionally, a study by Arnold (2017) focused on the impact of contract cost management on supplier relationships. The findings of this study highlighted the importance of effective cost management in fostering positive relationships with suppliers. Organizations that were able to negotiate and manage costs effectively were more likely to maintain long-term partnerships with their suppliers, leading to improved supply chain performance. Effective management and control of costs associated with contracts can lead to improved efficiency, reduced risks, and stronger supplier relationships (Arnold, 2017). These findings emphasize the importance of organizations prioritizing contract cost management as part of their overall supply chain strategy. The studies conducted by Johnson et al., Smith and Jones, and Brown et al. have provided valuable insights.
into the impact of effective contract cost management on overall supply chain efficiency, risk reduction, and supplier relationships. These findings highlight the need for organizations to focus on developing and implementing robust contract cost management strategies to enhance their supply chain performance.

3.0 RESEARCH METHODOLOGY

This study adopted a descriptive survey research design, as it focuses on identifying who, what, where, when, and how much of existing phenomena (Cooper & Schindler, 2011). This method allows for generalizing findings to a larger population (Rahi, 2017), enabling the collection of both quantitative and qualitative data for comprehensive analysis. The target population comprised procurement officers, finance officers, and storekeepers from Kenya’s 47 County Referral Hospitals, totaling 141 respondents. Using stratified sampling, a sample size of 105 respondents was determined with the Yamane Formula. A questionnaire, featuring both open-ended and closed-ended questions, was the primary data collection instrument. The study involved a pilot test with 10 respondents to ensure validity and reliability, evaluated using Cronbach’s alpha. Data analysis employed both descriptive and inferential statistics, with Pearson Moment Correlation and multiple regression analysis used to explore the relationship between contract cost management and supply chain performance.

4.0 FINDINGS AND DISCUSSION

4.1 Instrument Response Rate

The study targeted procurement officers, finance officers and storekeepers in the county referral hospitals in Kenya. Mellahi and Harris (2016) define the response rate as the percentage of respondents who complete and return their questionnaires. The number of respondents whose questionnaires were completed and returned is divided by the number of respondents in the entire sample, including those who did not respond. According to the sample size, there were 105 research questionnaires distributed to the county referral hospitals. 100 out of 105 mailed and self-administered questionnaires were filled out adequately, yielding an 95.2 percent response rate. This is because some respondents declined to respond to the questionnaires. This is depicted in Table 4.1. The response rate was representative and adequate for analysis to make conclusions and generalize the research’s findings. Fincham (2014) recommends a response rate of 60% or above for the analysis. Similarly, according to Dubey and Kothari, (2022), a response rate of 50% should be considered average, 60% to 70% adequate, and 70% or higher should be considered remarkable.

Table 4.1: Instrument Response Rate

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed Questionnaires</td>
<td>105</td>
<td>100.0</td>
</tr>
<tr>
<td>Completed and Returned Questionnaires</td>
<td>100</td>
<td>95.2</td>
</tr>
<tr>
<td>Unreturned Questionnaires</td>
<td>5</td>
<td>4.8</td>
</tr>
</tbody>
</table>

4.2 Descriptive statistics

4.2.1 Contract Cost Management

The study's participants were asked to indicate the extent to which they agreed with the influence of contract cost management on the supply chain performance of county referral hospitals in Kenya using the five-point Likert scale of 5= [SA] Strongly Agree, 4= [A] Agree, 3= [N] Neutral, 2= [D] Disagree, 1= [SD] Strongly Disagree). To illustrate the key findings of contract cost management, the study used mean averages and standard deviations.

The means and standard deviations are depicted in the descriptive findings of contract cost management in Table 4.9. On measures to control costs: the study found out that respondents were not sure whether cost management helped in controlling contract specific cost (x̅ = 3.14, σ = 1.295). Given the five-point scale Likert mean of more than (x̅ = 2.6) and an average standard deviation, it is clear that a major section of the respondents was undecided about this statement.
According to Ahmed et al. (2023), organizations need to ensure effective cost management practices, including clear cost estimates, regular monitoring, and proactive risk mitigation, for significant contribution to project success and improved supply chain performance. Moreover, the study established that cost control predicted the future expenses and costs accordingly to work towards the expected revenues ($\bar{x} = 3.80, \sigma = .921$). Given the five-point scale Likert mean of more than ($\bar{x} = 3.4$) and an average standard deviation, it is clear that a major section of the respondents agreed with the statement. Nevertheless, by implementing robust cost control measures and utilizing historical data analysis, businesses can gain valuable insights to make informed predictions, develop realistic budgets, and ultimately work towards achieving their expected revenue goals. According to Rubin (2017), effective cost control can contribute to higher profit margins by ensuring expenses align with revenue expectations.

Further, the study established that cost management systems ensure adherence to budgeted costs during contract implementation ($\bar{x} = 2.52, \sigma = 1.642$). Given the five-point scale, Likert mean of less than ($\bar{x} = 2.6$), and an average standard deviation, it is clear that a major section of the respondents disagreed with the statement. These findings did not mirror those of Yismalet and Alemu (2018), who established that implementing cost management systems led to improved cost performance, reduced cost overruns, and better adherence to budgets in construction projects. On predefined cost maintenance, the findings showed that cost budgeting ensures predefined costs are maintained as recorded in the contract agreement ($\bar{x} = 3.80, \sigma = .974$). Given the five-point scale Likert mean of more than ($\bar{x} = 3.4$) and an average standard deviation, it is clear that a major section of the respondents agreed with the statement. Moreover, the study established that continuous cost checking enhances progressive contract implementation ($\bar{x} = 4.26, \sigma = .981$). Given the five-point scale Likert mean of more than ($\bar{x} = 4.2$) and an average standard deviation, it is clear that a major section of the respondents strongly agreed with the statement. By continuously checking costs, deviations from the budget can be identified early, allowing for timely corrective actions to prevent significant cost overruns at later stages of the project. This aligns with the core principle of progressive contracts, where payments are made based on completed milestones, enabling early course correction (Ahmed et al., 2023).

The findings illustrated that the participants were unsure whether their firms used performance-based contracts that link payments and penalties to supplier performance ($\bar{x} = 2.96, \sigma = 1.556$). Given the five-point scale Likert mean of between ($\bar{x} = 2.6$ and $3.4$) and an average standard deviation, it is clear that a major section of the respondents was undecided about the statement. Performance-based contracts (PBCs) are gaining traction in various industries as a way to incentivize and improve supplier performance. These contracts link payments and penalties directly to pre-defined performance metrics, fostering a results-oriented approach in the buyer-supplier relationship (Akkermans et al., 2019). The findings also implied that most county referral hospitals in Kenya adopted continuous cost checking to enhance progressive contract implementation. These practices improved contract cost management. According to Kerzner (2017), effective cost management practices facilitate the controlled management of change orders. This involves clearly defining the cost implications of any proposed changes and ensuring proper approval processes before implementation, minimizing financial risks and maintaining project/supply chain continuity.
Table 4.2: Contract Cost Management Practices

<table>
<thead>
<tr>
<th>Statements on Contract Cost Management</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost management helps in controlling contract specific cost</td>
<td>3.14</td>
<td>1.295</td>
</tr>
<tr>
<td>Cost control predicts the future expenses and costs accordingly to work towards the expected revenues</td>
<td>3.80</td>
<td>.921</td>
</tr>
<tr>
<td>Cost management system ensure adherence to budgeted costs during contract implementation</td>
<td>2.52</td>
<td>1.642</td>
</tr>
<tr>
<td>Cost budgeting ensures predefined costs are maintained as recorded in the contract agreement</td>
<td>3.80</td>
<td>.974</td>
</tr>
<tr>
<td>Continuous cost checking enhances progressive contract implementation</td>
<td>4.26</td>
<td>.981</td>
</tr>
<tr>
<td>We use performance-based contracts that link payments and penalties to supplier performance</td>
<td>2.96</td>
<td>1.556</td>
</tr>
</tbody>
</table>

4.2.2 Supply Chain Performance of County Referral Hospitals

Performance was measured by the following constructs: responsiveness, cost of operations, and efficiency. The study's participants were asked to state the extent they agreed with the statements concerning the supply chain performance of county referral hospitals in Kenya using the five-point Likert scale of 5= [SA] Strongly Agree, 4= [A] Agree, 3= [N] Neutral, 2= [D] Disagree, 1= [SD] Strongly Disagree). The study used mean averages and standard deviations.

On responsiveness, the findings illustrated that the institutions’ supply chain is responsive to clients’ needs ($x̅ = 3.72$, $σ = 1.055$). Given the five-point scale, Likert mean of more than ($x̅ = 3.4$), and an average standard deviation, it is clear that a significant section of the respondents agreed with the statement. A study by Sharma et al. (2020) linked supply chain responsiveness to increased customer satisfaction. This is attributed to factors like faster order fulfillment, greater flexibility in order modifications, and the ability to meet specific customer requirements. Satisfied customers are more likely to remain loyal and advocate for the brand. Further, this study found that the organizations experience high order fill rates ($x̅ = 4.18$, $σ = 1.132$). Given the five-point scale Likert mean of between ($x̅ = 3.3$ and $4.2$) and an average standard deviation, it is clear that a significant section of the respondents agreed with this statement.

On stock records, the findings illustrated that the organizations kept accurate stock records ($x̅ = 3.15$, $σ = 1.654$). Given the five-point scale Likert mean of more than ($x̅ = 2.6$) and an average standard deviation, it is clear that a significant section of the respondents was undecided about this statement. However, organizations should adopt accurate stock records to ensure order fulfillment accuracy and timely deliveries, leading to higher customer satisfaction (Hrouga and Sbihi, 2023). Moreover, the findings illustrated that contract efficiency improves our responsiveness ($x̅ = 4.22$, $σ = 1.106$). Given the five-point scale Likert mean of above ($x̅ = 4.2$) and an average standard deviation, it is clear that a significant section of the respondents strongly agreed with this statement. Also, the findings illustrated that contracts effectiveness leads to higher order fill rates ($x̅ = 3.72$, $σ = 1.055$). Given the five-point scale Likert mean of above ($x̅ = 3.4$) and an average standard deviation, it is clear that a significant section of the respondents agreed with this statement. Lastly, the findings illustrated that contract value leads to improved customer service ($x̅ = 4.18$, $σ = 1.132$). Given the five-point scale Likert mean of above ($x̅ = 3.4$) and an average standard deviation, it is clear that a significant section of the respondents agreed with this statement. These findings implied that most county referral hospitals in Kenya adopted contract efficiency to improve their responsiveness. According to Teece (2018), a business's success...
Depends on improper operationalization. Therefore, these findings compared to those of Darcy, Hill, McCabe, and McGovern (2014), who posited that profitability analysis gave firm managers a clear picture of their company, enabling them to strategize better and plan for their long-term growth and improve supply chain performance.

Table 4.3: Performance Practices

<table>
<thead>
<tr>
<th>Statements on Supply Chain Performance</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our supply chain is responsive to clients’ needs</td>
<td>3.72</td>
<td>1.055</td>
</tr>
<tr>
<td>We experience high order fill rates</td>
<td>4.18</td>
<td>1.132</td>
</tr>
<tr>
<td>We keep accurate stock records</td>
<td>3.15</td>
<td>1.654</td>
</tr>
<tr>
<td>Contract efficiency improves our responsiveness</td>
<td>4.22</td>
<td>1.106</td>
</tr>
<tr>
<td>Contracts effectives leads to higher order fill rates</td>
<td>3.72</td>
<td>1.055</td>
</tr>
<tr>
<td>Contract value leads to improved customer service</td>
<td>4.18</td>
<td>1.132</td>
</tr>
</tbody>
</table>

4.3 Inferential Statistics

The objective for this study was to determine the effect of contract cost management on the supply chain performance of county referral hospitals in Kenya. To achieve these objectives, coefficient of determination ($R^2$), change in $R^2$, analysis of variance (ANOVA) as well as model coefficient was generated.

4.3.1 Regression Analysis

The study used multiple regression analysis to determine the significance of the effect of pooled dependent on the independent variable. This analysis explained how the independent variable influenced the dependent variable. The results are presented in Table 4.12. The results in Table 4.22 suggested that the value obtained for Pearson’s Model Correlation Coefficient ($R$) is $r = 0.848^a$ was high. This indicated that the model improved when variables were added to determine the determinants of the supply chain performance of county referral hospitals in Kenya. The adjusted $r$-square value of $r = 0.595$ also suggests that the regression model could explain approximately 60% of the changes in the dependent variable. The ANOVA test results on the dependent and independent variables are summarized in Table 4.4.

Table 4.4: Multiple Linear Regression Analysis Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.848$^a$</td>
<td>.619</td>
<td>.595</td>
<td>.822</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Contract Cost Management Practices

The results of Table 4.13 indicated a significant relationship between the independent variable and the dependent variable ($F= 70.827; df = 1, 98, 99; p = 0.000$). These findings validated the one suggested in Table 4.11, thus, implying that contract cost management practices of contract management were significant in determining the supply chain performance of county referral hospitals. The beta value was used to determine the importance of the independent variable used in the model, and the results are summarized in Table 4.5.

Table 4.5: Summary of ANOVA Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>46.392</td>
<td>1</td>
<td>46.392</td>
<td>70.827</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>64.198</td>
<td>98</td>
<td>.655</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>110.590</td>
<td>99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Supply Chain Performance
b. Predictors: (Constant), Contract Cost Management,

The results in Table 4.6 indicated that contract monitoring was the most important variable in the model ($\beta = 0.384$). This was followed by cost management ($\beta = 0.176$) respectively. These beta values indicated that the dependent variable, that is, the supply chain performance of county referral hospitals in Kenya, would change by a corresponding number of standard deviations as a result of changes in the standard deviations of the respective variables. Thus, the resulting linear regression model was: $Y$ (Firm Performance) = $0.611$ (Constant) + $0.143$ (Contract Cost Management).

Table 4.6: Overall Significance of Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.611</td>
<td>.595</td>
<td>1.027</td>
<td>.000</td>
</tr>
<tr>
<td>Contract Cost Management</td>
<td>.143</td>
<td>.066</td>
<td>.176</td>
<td>2.184</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Supply Chain Performance

SUMMARY, CONCLUSION AND RECOMMENDATION OF THE STUDY

5.1 Summary of the Study

The specific objective sought to analyze the influence of contract cost management on supply chain performance of county referral hospitals in Kenya. The firms adopted continuous cost checking to enhance progressive contract implementation. This ensured deviations from the budget are identified early, allowing for timely corrective actions to prevent significant cost overruns at later stages of the project. Moreover, it also saved on costs and reduced other expenses. Cost budgeting ensures predefined costs are maintained as recorded in the contract agreement. Also, cost control predicted the future expenses and costs accordingly to work towards the expected revenues. The majority of the county referral hospitals did not implement cost management practices in controlling contract specific cost. Organizations need to ensure effective cost management practices, including clear cost estimates, regular monitoring, and proactive risk mitigation, for significant contribution to project success and improved supply chain performance. The findings showed that there was a positive and significant correlation between contract cost management and supply chain performance of county referral hospitals in Kenya. The study also established that there was a positive and statistically significant relationship between contract cost management and supply chain performance of county referral hospitals in Kenya.

5.2 Conclusion of the Study

The study concluded that an increase in supply chain performance for every unit increase in contract cost management was predicted. This research revealed that when contract cost management improved, county referral hospitals gained an increased supply chain performance. Further, the study concluded that cost management systems ensure adherence to budgeted costs during contract implementation. As derived from other studies, this study also concluded that implementing cost management systems led to improved cost performance, reduced cost overruns, and better adherence to budgets in construction projects. Furthermore, the study concluded that the firms did not use performance-based contracts that link payments and penalties to supplier performance.

According to the results, the study concluded that the county referral hospitals used continuous cost checking enhances progressive contract implementation. This ensured deviations from the budget can be identified early, allowing for timely corrective actions to prevent significant cost overruns at later stages of the project. Nevertheless, cost control predicted the future expenses and
Research costs accordingly to work towards the expected revenues. Moreover, according to the study, it can be concluded that cost budgeting ensures predefined costs are maintained as recorded in the contract agreement.

5.3 Recommendation of the Study
Adopting cost management systems to ensure adherence to budgeted costs during contract implementation, according to the report, was recommended to since it would also result to improved contract management and supply chain performance. Additionally, the study recommended using performance-based contracts that link payments and penalties to supplier performance. Additionally, county referral hospitals were encouraged to implement additional strategies that would ensure cost management helped in controlling contract specific cost. These measures would include; renegotiating contracts, getting competitive bids, reducing inventory and increasing efficiency with automation software. Finally, even though the majority of county referral hospitals employ contract cost management systems, there are still gaps in contract cost control and contract budgeting practices. Therefore, there is a need to hold contract cost management awareness seminars periodically in the organizations.

5.4 Areas of Further Research
The findings of this study bring us closer to the reality of contract cost management practices, and the supply chain performance of county referral hospitals in Kenya. However, the complexity of the implementation of the study variable remains ambiguous. The study narrowed to a literature review exclusively suggesting cost management, plus the transaction cost theory that supported this variable. This study provided considerable information on the desirable expectations of county referral hospitals in their quest to enhance their supply chain performance. However, empirical research needs to be conducted to establish the effects of contract management metrics on the performance of other sectors of in the economy, such as dairy, tea, and pharmaceutical. Moreover, to determine the performance of the participating companies over others, future research should take into account a comparative study.

REFERENCES


