Internal Control Elements and Organizational Performance: Evidence from the Level-5 Public Hospitals in Nairobi County

Ruth Jebungei Tuwei[1] and Ibrahim Tirimba Ondabu[2]

[1,2]Department of Accounting, Finance and Economics, KCA University
(*Corresponding author's E-mail: tirimba5@gmail.com)

ABSTRACT

Several companies around the world have recently collapsed, despite the presence of internal controls. This has raised questions about the significance, and power of internal control, especially when it comes to an organization's organizational performance. The general objective of this research study was to examine the effects of internal control elements on the organizational performance of level-5 hospitals in Nairobi County, Kenya. The study was guided by specific objectives. A descriptive research design was used in this survey. The population of this study was 68 staff in the accounts/finance, administration, ICT and operations departments at the 3 level-5 public hospitals in Nairobi County (Mama Lucy Kibaki, Pumwani Maternity and Mbagathi District Hospital). The research used the census method where all 68 respondents were involved in the study. Data was collected using a questionnaire. The statistical package for social sciences (SPSS) was used to analyze the data. Descriptive statistics of percentages means, and frequency tables were used. The study established that control environment, risk management, information communication and monitoring activities have a positive and significant effect on the performance of level five public hospitals in Nairobi County. Control activities, on the other hand, had a negative and an insignificant effect on the performance of level five public hospitals.

1. INTRODUCTION

Internal controls are safeguards that a company implements to ensure that its priorities, goals, and missions are met (Cheruiyot, Namusonge, & Sakwa, 2018). Internal control in an organization consists of establishing operational standards that regulate the actions of organizational members, establishing security measures to ensure asset safety, establishing proper record-keeping

procedures, defining reporting relationships among organizational members, and establishing authentication procedures are just a few examples of such measures (Ibrahim, Diibuzie & Abubakari, 2017).

Ambarriani (2012) suggested that in hospitals, internal control ensures that people or employees operate according to the plans. Public hospitals' revenue comes from both the local government and national budget subsidies (Bastian, 2018). Verschoor (2009) believes that management commitments to internal controls are more than just promotional statements.

External activities such as economic developments and the McKesson and Robbins case in the United States, as well as other auditing-related cases in the United Kingdom and Australia, predated the adoption of auditing standards requiring examination of internal control (Dirsmith & McAllister,1982; Lee, 1988).

In terms of the Ghanaian health sector, the continued delay in reimbursement of health facilities at all levels by the national health insurance scheme continues to have a detrimental effect on service delivery, particularly public health promotion and prevention activities throughout the country (Ghana Health Service, 2014). Following this, multiple attempts to collaborate with the National Health Insurance Authority have resulted in little improvement in the late reimbursement of all facilities.

According to a financial report published by the Institute of Certified Public Accountants of Kenya ICPAK (2007), many organizations have advanced technological platforms, but internal control, which is an institution system defined and implemented under its jurisdiction, aims to ensure compliance with applicable laws and regulations, as well as the instructions and directional guidelines established by Executive Management or the Board of Management.

When internal controls are implemented, they can give management and the board of directors of a company a reasonable but not absolute assurance that the organization's goals will be met. It is possible to prevent and detect errors and fraud using internal control elements (Abdusalomova, 2020).

The COSO framework (2013) identifies five major internal control system elements against which the review should be conducted. Control environment, risk assessment, control activities, information and communication, and monitoring are among them. The control environment, according to COSO (2013), sets the tone of an organization by influencing the control consciousness of its employees by serving as the foundation

for all other internal control components, providing discipline and structure.

The fundamental concepts of internal controls state that management must establish and maintain the entity's controls through risk management efficiency, provide a high level of compliance for all employees with the potential for intra-organizational communication, and be effective through continuous monitoring adequacy (Reid & Ashelby, 2002). Internal control's role here is to manage risk rather than to eliminate it.

Control activities are the policies, procedures, and mechanisms that ensure the proper execution of management directives (Aikins, 2011; Rezaee, Elam, & Sharbatoghlie, 2001). Proper documentation of policies and procedures in these areas not only clarifies how control activities are to be carried out but also provides sufficient information for auditors to assess the overall adequacy of control design over financial management practices (Aikins, 2011).

Nairobi Level Five Hospitals fall under the category of County hospitals. They are located within Nairobi County, that is, Mama Lucy Kibaki, Pumwani, and Mbagathi hospitals. The level five hospitals are receiving 1600 to 2500 patients every day, a number of them being from outside the County (Maichuhie, 2018). In 2018 the county bought drugs valued at Sh134 million.

With the county's rapid population growth, the number of level-5 medical facilities has increased significantly, indicating a rise in the number of patients seeking specialized healthcare services. Administration in level 5 hospitals are responsible for ensuring that the facility is able to deliver effective healthcare facilities by ensuring that there are qualified internal control elements in place for the hospital's efficient operations. The administrative wing of the facility is also in charge of exchanging different expectations and delegating administrative elements in order to achieve an efficient internal control environment. To ensure that all internal controls are adhered to, facility management is responsible for ensuring that the essential aspects of internal control are clearly identified and interpreted in a manner that is unique to the understanding of the various departments. Also required is that all facility employees perform and comply with all internal control acts as defined by the administrative management.

Implementing sound internal control elements has proven to be one of the most successful ways to prevent fraud (Njagi, 2018). A variety of businesses claim that they have sufficient internal controls in place to prevent or even eliminate fraudulent engagements. However, due to the fact that companies change and more people are recruited for old and new

roles, certain internal controls introduced by organizations might not be as successful (Njagi, 2018). Internal control has acquired prominence in a growing number of organizations in Kenya today, spanning all sectors, including the public sector and the health sector.

Internal controls, in particular, are essential to guarantee that public health facilities are effectively designed and executed and that they meet their objectives by reducing their losses. Despite the fact that Kenya's county governments have worked hard to improve internal control systems in public hospitals since the health system became a devolved unit, a slew of problems linked to inadequate internal control systems have wracked the country's public healthcare. Nairobi's public hospitals are among the best in the country (Cheruiyot, Namusonge, & Sakwa, 2018). Nairobi county, for example, is said to have lost about 500 million in county revenue raised from public hospitals in the county in 2019 (Nairobi County Report, 2019).

Internal control and financial results have been the focus of a variety of studies conducted both globally and locally. Simangunsong (2014) looked into the impact of effective internal controls and the role of internal audits in local government. The impact of internal structures on the organizational performance of small and medium-sized businesses in Kisumu was investigated by Nyakundi and Tinega (2014). Internal controls and the organizational performance of Kenyan manufacturing firms were studied by Kamau (2014). Previous empirical studies have shown that there are few studies that focus on internal controls and performance of public hospitals. As a result, the current study aimed to investigate the effects of internal control systems on the performance of Nairobi County's level-5 public hospitals.

The general objective of this study was to examine the effect of internal control elements on the performance of level-5 public hospitals in Nairobi County. The independent variables were control environment, risk assessment, control as well as information and communication.

2. LITERATURE REVIEW

This section reviews past studies on internal control elements and organizational performance in terms of control activities, risk assessment, control environment, information and communication as well as monitoring elements.

2.1. Control activities and organizational performance

Regulations and procedures that help to ensure that management directives are followed are referred to as control activities. They assist in ensuring

that the appropriate steps are taken to resolve risks in order to achieve the objectives of the company. A policy that determines what should be done and procedures that must be followed to influence the policy are the two parts of control operations (Etengu & Amony, 2016). All policies must be adhered to with care, diligence, and consistency.

In Indonesia, Murti, and Kurniawan (2020) looked into the effects of internal audits on local government performance, as well as the efficacy of internal control activities. The effect of partially control environment variables, monitoring activities, and the role of internal audit on the performance of Surakarta's local governments was examined using both management and internal audit practices as part of the internal control process. The sample constituted 126 workers from 33 regional organizations in Surakarta, including a head and staff. The findings revealed that the Surakarta local government's control and monitoring activities were effectively carried out.

In another report, Sibanda, Zindi, and Maramura (2020) looked at supply chain management control practices and transparency in a South African metropolitan municipality. The aim of this study was to identify and mitigate the risks to accountability in a typical South African Metropolitan Municipality. Internal audit controls and policies were found to be ineffective, making it impossible for internal audit and oversight committees to quickly detect unethical, unfair, inequitable, opaque, uncompetitive, and cost-inefficient SCM practices. As a result, systematic noncompliance with SCM regulations, procurement and tendering procedures, favoritism, and corruptible tendencies are on the rise. Risks in the SCM process must be mitigated as quickly as possible in order to address risks that limit municipal financial transparency.

Olanrawaju (2019) analyzed the internal governance control activities and efficiency of Nigerian public sector agencies in a sample of 203 and semi-structured interviews were conducted to collect data. PLS-SEM was used to analyze the and the findings on standards of behavior revealed that leadership efficiency and code of ethics have a positive significant relationship with public sector performance. Risk management is inextricably linked to public sector success in terms of operational processes and stakeholder contact. According to external governance findings, the auditor general and public account committee's oversight roles have a positive and significant impact on public sector efficiency.

Bett and Memba (2017) focused on Menengai to examine the effect of internal control on the organizational performance of Kenyan processing firms. In a survey of 189 respondents, the ANOVA results show that the

control climate, risk evaluation, and knowledge all have a direct impact on Menengai Company's financial results. This research will shed light on the various internal control activities that public hospital administrators in Kenya should implement.

Njeri (2014) examined the effects of internal controls on the financial output of Kenyan manufacturing firms. The findings reveal that the monitoring environment was one of the internal controls of the organization's functionalities that had a significant impact on the financial output in the majority of manufacturing companies. Management had also put procedures in place to reduce the critical risks that could arise as a result of fraud, it was discovered.

2.2. Risk assessment and organizational performance

An organization's risk evaluation is a critical component of an efficient internal control system since it deals with the process of assessing and evaluating risk as a continuous process (Mustafa, 2019). Risk assessment entails, for example, how management determines which risks are relevant to the company by scrutinizing financial statements that provide an accurate and fair picture of the firm's results in a given fiscal year to ensure that the reports were prepared in accordance with international financial reporting regulations and other relevant requirements. Risks must be managed with caution at all levels, and appropriate steps must be taken to mitigate them. Risks must be assessed after they have been detected. Routine risk assessments and an understanding of the impact on internal controls are required for change management. As a result, changes in the economic, business, and regulatory environments must be recognized and responded to by the firm's operations (Mustafa, 2019).

In Uganda, Kabuye *et al.* (2019) looked at supermarket internal control mechanisms, working capital management and financial efficiency in a study. This study was cross-sectional and correlational, and it used firm-level data from 110 Ugandan supermarkets obtained through a questionnaire survey. Working capital management is frequently cited as a key metric of financial success. Contrary to popular belief, internal control mechanisms have no direct impact on financial outcomes. As a result, companies that effectively manage their working capital are more likely to have effective internal control mechanisms, which increases financial efficiency.

Ayimposa *et al.* (2020) conducted a study in Ghana on the impact of risk assessment, control environment, and control activities on the output of listed banks in Ghana. This study focused on three aspects of internal control systems: environment monitoring, risk assessment, and control

operations. The field data were subjected to descriptive and regression analysis. The research findings indicate that risk management has a significant impact on organizational performance but that the monitoring environment and control activities have only a weak impact on organizational performance.

Charity and Newman (2018) investigated the impact of risk management frameworks on financial results in the Zimbabwean public sector. The sample size was 50 people from the ministry's Harare departments, with a target population of 65 people. A questionnaire was used to gather information. According to the researchers, the ministry's risk management (RM) system effectiveness was harmed by major challenges such as a shortage of qualified staff, which resulted in an expertise gap in adopting a structured framework, the lack of an audit committee, and a lack of management engagement and collaboration.

Lagat (2017) investigated how risk evaluation strategies affect financial institutions' overall organizational performance on a local level. Explanatory analysis was used in this research. The study chose 239 respondents using stratified random sampling from a target population of 46 commercial banks, 52 Micro Finance Institutions (MFIs), and 200 SACCOs. Questionnaires were used to collect information. Pearson product moment correlation was used to conduct inferential statistics, while descriptive statistics were provided. The research found that the ownership structure is an important corporate governance mechanism that moderates the relationship between risk management activities and financial institution efficiency. Various risk management practices, such as recognition, review, assessment, and monitoring, should be strengthened to increase financial institution results.

Mutuku (2016) investigated the impact of risk management on Kenyan commercial banks' organizational performance. Questionnaire were issued to 42 commercial banks. The findings show that risk management activities had a positive impact on commercial bank organizational performance, except capital adequacy and risk control, which had a negative impact.

2.3. Control environment and organizational performance

The control climate sets the tone of an organization and has an effect on its people's control consciousness. Each unit's leaders build a local control environment. It serves as the bedrock for all other internal control elements that include discipline and order. Integrity and ethical concerns such as adherence to competence, working style, and management authority are examples of environmental control factors (Qiu, Shaukat, & Tharyan, 2016).

In Jordan, Al-Zwyalif (2015) investigated the impact of internal control environments on corporate governance. Primary data was gathered using a questionnaire. The results of statistical analysis showed that devoting any element of internal control leads to a greater degree of reinforcement of the corporate foundations of governance. Furthermore, the findings showed that internal management plays an important role in reinforcing the corporate governance foundations in Jordanian insurance companies. The study concluded that good corporate governance necessitates strict adherence to all aspects of internal control.

Kumuthinidevi (2016) investigated the effectiveness of internal control environments in private banks in Trincomalee, Sri Lanka. According to the findings of the data analysis, risk evaluation, control climate and practices, correspondence, accounting, and self-assessment are all beneficial to the effectiveness of internal control practices.

Internal controls, according to Kamau (2014), had an impact on the organizational performance of Kenyan manufacturing firms. According to the findings, in the majority of manufacturing firms, the monitoring environment was one of the internal monitors of the organization's functionalities that had a direct effect on the firm's organizational performance. The staff was also prepared to implement accounting and financial management systems, and the security structure identified and secured organizational assets, according to the findings. According to the statistical findings of regression analysis, the internal control and organizational performance of Kenyan manufacturing firms have a positive relationship. According to the study, internal and external auditors should be kept up to date on international financial reporting standards (IFRS) and principles on a regular basis in order to develop their knowledge and skills in applying accounting practices and stay current on current issues.

Kinyua *et al.* (2015) investigated the impact of the internal control environment on the organizational performance of Nairobi Stock Exchange-listed companies. Using a survey method, responses were obtained from 38 listed companies. Descriptive and inferential statistics were used to analyze the data. The findings showed that there was a significant correlation between the internal control environment and financial results, however, companies need to strengthen the internal control environments to improve financial efficiency.

2.4. Information and communication and organizational performance

To enable employees to complete their tasks, critical data must be detected, collected, and shared at the appropriate time and in the appropriate format.

Effective communication must take place across the organization, flowing down, around, and up. It has to happen to all the people involved (Luo & Bu, 2016). Top management needs to send a clear message to employees that their control responsibilities must be taken seriously. They must be aware of their own role in internal control, as well as how their actions interact with the work of others. They have to come up with a way to get critical information upstream. The information system includes company processes such as financial statements and correspondence. An information system is made up of tools, people, procedures, and data (Luo & Bu, 2016).

Ngantchou (2016) conducted an experimental study in France to determine the effects of ICT on worker activity. Since survey data made it difficult to collect individual and team production, the study used an experimental methodology. Employees favour information technology, according to the findings, and those who use it are more efficient than those who do not. It was also decided that organizations that drive decision-making down to the employee level could result in significant costs for the company. Technology-based control, on the other hand, has been very effective in lowering those costs. Indeed, when the sanction is available, technology monitoring has a disciplining effect, but this effect fades over time.

In Egypt, Oussii and Taktak (2018) investigated the impact of internal audit function characteristics on the quality of internal controls. A questionnaire was used to collect data on the perceptions of external and internal auditors about the impact of the internal control system on audit report quality. After being reviewed by statistics professors at Egyptian universities, the questionnaire was distributed to 55 external and internal auditors practicing in Egypt. The statistical analysis revealed a statistically significant effect of information and communication on the audit report quality.

Muhunyo and Jagongo (2018) investigated the organizational performance of public higher education institutions in Nairobi City County, Kenya, using internal control mechanisms. The study's findings show that the control environment, risk assessment, control procedures, and information and communication as internal control system measures all have a direct impact on the organizational performance of higher education institutions in Nairobi City County.

Muchoki (2020) conducted research at the National Transport and Safety Authority on the impact of internal control systems on efficient revenue collection. To describe the relationship between internal control systems and efficient revenue collection, the researcher used a descriptive research

design. The study's target population consisted of three NTSA senior managers from each of the 18 stations, for a total of 54 respondents. Because of the impact of Covid-19, the researcher collected data using questionnaires that were administered digitally. According to the findings of the study, internal control systems control environment, risk assessment, control activities, information communication, and monitoring have a combined positive and significant effect on the level of revenue collection at NTSA.

Mongare and Nasidai (2016) investigated the impact of communication techniques on the Kenya Ports Authority's organizational efficiency. The relationship between communication techniques and organizational efficiency was explored by the researcher. The study's key finding was that communication techniques play a critical role in high-performance teams.

2.5. Monitoring element and organizational performance

Monitoring is a technique for evaluating the system's output over time. Separate assessments' scope and frequency are solely determined by a risk assessment and the efficacy of ongoing monitoring procedures. Monitoring includes safeguarding facilities over access to assets and documents, granting access to computer programs and data files, and conducting periodic audits of records. The efficient operation of the inward control system is ensured by task observation. Observation is how an organization determines whether its strategy and methodology that were planned and implemented by the board, are being carried out successfully by representatives (Abbasi & Hollman, 2000).

Ronald (2016) used the case of Wakiso District in Uganda to conduct a case study review that looked at the effects of project monitoring and assessment elements on the success of the Electrification Programme in Uganda. A correlational analysis design was used in this study. The study included 113 individuals, including 10 executives, 25 technocrats, and 78 members of the project committee. Questionnaires were used to collect data from project committee representatives in the Rural Electrification project. According to the findings, there was a major connection between project monitoring and the overall success of the Wakiso District Electrification Program.

In Indonesia, Simangunsong (2014) investigated the effects of internal control and internal audit effectiveness on local government efficiency. A census method was used to conduct the research. The analysis relied on primary data collected via questionnaires. The data analysis methodology used to test the hypothesis was regression analysis using SPSS. Prior to

testing the hypothesis, the study performed a validity and reliability test. Internal control and internal audit had a positive effect on local government performance both concurrently and to some extent, according to the findings.

Amudo and Inanga (2009) evaluated internal control systems in African Development Bank Group (AfDB) Regional Member Countries (RMCs), with an emphasis on Uganda in East Africa. Monitoring, control practices, risk management, knowledge and communication, and the control environment were among the variables. According to the findings, certain control elements of efficient internal control systems are missing in these programs, rendering the existing control mechanisms ineffective. The study proposed that the projects' current internal control systems be strengthened.

Mwakimasinde, Odhiambo, and Byaruhanga (2017) investigated the financial performance of Kenyan sugarcane out-grower companies in relation to their internal control structures. The study's primary objective was to determine how internal control system components affected the financial performance of sugarcane out-grower companies. Internal control systems were defined in terms of their control environment, risk management mechanism, information system, and control activities, whereas financial results were defined in terms of cost per unit, goal achievement, and profitability or surplus. Internal control systems, the regression results indicate, assist sugarcane out-grower firms in improving their organizational performance. The following recommendations were made in light of the study's findings and conclusions: Monitoring activities have been shown to have a statistically significant positive effect on the production of sugarcane out-grower companies, allowing these businesses to strengthen their internal control systems.

Barra (2016) looked into the effect of fines and other internal controls on the possibility of workers committing fraud. The results showed that having a simple separation of duties and control activities increases the cost of fraud. As a result, in a split-task setting, the advantage of committing fraud for an employee must outweigh the cost of committing fraud. Furthermore, while the division of duties is the "lowest-cost" fraud deterrent for non-managerial workers, maximum penalties are the "lowest-cost" fraud disincentives for managers, it was discovered. The findings indicate that monitoring controls are essential for the efficacy of internal controls such as responsibilities division.

Brian (2017) investigated the impact of internal controls at the Kenya Revenue Authority (KRA). Both qualitative and quantitative methods were used in the study. Primary data was obtained using structured

questionnaires for the study. The study enlisted the help of 38 individuals. The analysis of the data revealed that in order for internal controls to function, all five elements of regulation must be in place: environment, risk assessment, control operations, communication and information, and assessment. According to the study, ineffective internal controls have also aided fraud, asset loss, and misappropriation of revenue earned. Internal controls do have drawbacks, according to the report, and KRA revenue collection and internal controls have a direct relationship.

The above literature has reviewed related studies on the control environment, risk assessment, control, and information communication. The empirical literature reveals mixed reactions to the relationship between internal control elements and organizational performance. Further, the current studies reveal limited research on the public hospitals' area of study. This study therefore, aimed to clear the air by determining the effect of internal control systems on the performance of Nairobi County's level-5 public hospitals.

2.5. Operationalization of Variables

Table 2.1
Operationalization framework

Variable	Indicators	Measurement Scale	Method of Data Collection	Data Analysis
Control Activities Independent Variable	• Patients admission • Supplier payment approval mechanism • Verification of documents	Likert/ordinal	Primary data Questionnaire	Frequencies and percentages
Risk Assessment Independent Variable	• Reserve for loss account receivable • Evaluation of revenue cycle • Clear procedure on cash management (forms and documents)	Likert/ordinal	Primary data Questionnaire	Frequencies and percentages
Control Environment Independent Variable	• Integrity • Ethical Values • Independent of audit committee	Likert/ordinal	Primary data Questionnaire	Frequencies and percentages

contd. table 1

Variable	Indicators	Measurement Scale	Method of Data Collection	Data Analysis
Information and Communication Independent Variable	• Flowchart of the assignment • Implementation procedure • Complain handling procedures	Likert/ordinal	Primary data Questionnaire	Frequencies and percentages
Monitoring Element Independent Variable	• Quality assessment • System effectiveness • Maintenance of inventory	Likert/ordinal	Primary data Questionnaire	Frequencies and percentages
Organizational performance Dependent Variable	• Increased Revenue • increased number of patients • Number of complains • Improved services	Ordinal	Primary data Questionnaire	Frequencies and percentages

3. RESEARCH METHODOLOGY

The research design for this study was a descriptive sample research design. Using a descriptive survey study design, you can obtain a straightforward result as well as the characteristics associated with it at a specific time (Kothari, 2014). A descriptive survey is used to describe a population in terms of key variables, with the primary goal of establishing a relationship between them. This research design has the advantage of being simple to comprehend. The advantage of using the descriptive design is that it can be used to describe the basic features of a large population, it has a high level of accuracy, which reduces observer bias, and it is simple to implement by giving all subjects the same inducement (Kothari, 2014).

The study's target population was 68 employees working at the 3 level-5 public hospitals in Nairobi County from accounts/finance, administration, and operations departments (Nairobi County Employment Report, 2020). This study employed a census since the number of the respondents is small and manageable, thus, all 68 staff were involved in the study.

The sample size for this analysis was 68 employees working in the three (3) level-5 public hospitals in Nairobi County within accounts/finance, administration, and operations departments. Questionnaires were used to obtain primary data. Since the information obtained is not immediately measurable, questionnaires are sufficient for this analysis. It's a common technique, particularly for large inquiries. The semi-structured

questionnaire was distributed to the sampled population through drop-and-pick. The information gathered by questionnaires was free of bias. The questionnaires were issued to 68 respondents, and those fully filled were chosen for data analysis and tabulation using frequency tables and figures.

Pre-testing was carried out to identify defects in the design and instrumentation, as well as to provide alternative data for sample collection (Cooper & Schindler, 2014). The pilot test was conducted on 10% of the sample population (7 respondents) from Thika level 5 hospitals. It has been suggested that an effective pilot study uses 1 percent to 10 percent of the total sample size (Mugenda & Mugenda, 2013). The findings of the pilot study were left out of the final report. The findings of the pilot study assisted in identifying and correcting instrument errors, ensuring that the instruments collect the information that is necessary for this study.

The study adopted the widely used internal consistency measure known as the alpha coefficient (a). Internal consistency Cronbach's Alpha (1997) is a reliability coefficient that ranges from zero to one and indicates how strongly the measured items are related. Only constructs with a cutoff of 0.7 or higher were considered for further analysis. For any researchable analysis, a reliability test of 0.7 is recommended (Kothari, 2014).

A total of 7 respondents were pre-tested to validate the validity of the data collection instruments. The respondents were asked to verify whether questionnaires are useful in gathering information about the internal control elements' effects on the performance of Kenya's level-5 public hospitals. The quality of the respondents' answers was compared to the study objectives and scored on a scale of 1-(strongly disagree) to 5-(strongly agree). The study's findings would be used to measure the study's reliability and validity.

The frequency tables, percentages, and means were used to present the data. To evaluate the findings, I tabulated, coded, and analyzed the responses to the questionnaires using the Statistical Package for Social Science (SPSS). As illustrated below, multiple linear regression models were used to determine the relationship between the dependent variable (Y) and the independent variable (X).

$$Y = Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \quad ……\text{equation i}$$

Where:

Y = Organizational performance

X1 = Control environment

X2 = Risk assessment

X3 = Control Activities

X4 = Monitoring

X5 = Information and Communication

α = Constant

ε = Error term

Pre-analysis diagnostic measures like heteroscedasticity, multicollinearity, and normality checks were used to ensure that the regression model to be fitted does not breach the classical linear model assumptions, i.e. that the results are not biased. The Variance Inflation Factor (VIF) was used to test the level of multicollinearity. Breusch-Pagan tested heteroscedasticity. In this analysis, the Kolmogorov-Smirnov normality test was used. If Asymp. Sig> 0.05, the data in that sample are normally distributed; if Asymp. Sig 0.05, the data are not normally distributed.

4. DATA ANALYSIS, FINDINGS AND DISCUSSION

This study summarizes the findings and interpretations of the study, using the research objectives as a guide. Statistical, descriptive, and regression analyses were used to analyze the data collected in the study. Respondents' responses were analyzed using descriptive statistics to describe the effects of internal control elements on the performance of level-5 public hospitals in Nairobi County. ANOVA was employed to determine if there was a relationship between independent variables and the dependent variable.

4.1. Response Rate

Sixty-eight (68) questionnaires were delivered to the various staff members working at the three Nairobi County level-5 public hospitals. Fifty-eight (58) of the sixty-eight (68) questionnaires provided were properly completed. The aggregate response rate was 85 percent that was sufficient since it was more than 70% (Garg & Kothari, 2014). This high response rate can be attributed to the data collection technique used in the survey, which involved briefing all respondents on the study's purpose and the information sought by the questionnaire.

Table 4.1
Response Rate

	Frequency	*Percentage*
Response	58	85
Non-Response	10	15
Total	68	100

4.2. Demographic Information

Gender, level of education, and duration of working in the health sector are the demographic characteristics that this study sought. Objective characteristics such as demographics can be used to assess the strength of responses to a particular topic.

4.2.1. Gender of the Respondents

The study sought to determine the effect of internal control elements on the performance of level-5 public hospitals in Nairobi County. Participants were asked to identify their gender before taking part in the survey. The findings are summarized in Table 4.2.

Table 4.2
Gender of the Respondents

	Frequency	*Percentage*
Male	34	59
Female	24	41
Total	58	100

Table 4.2 clearly shows that the male gender accounts for 59 percent of participation, while the female gender accounts for 41 percent. This implies that top positions in public hospitals are dominated by men. However, most public hospitals have a fair gender representation and have exceeded 30 percent required by the Kenyan Constitution of 2010. This requirement considers not only the numbers but also the portfolio balance of how gender is distributed among positions in public hospitals.

4.2.2. Education Level of the Respondents

The study aims to assess the respondent's level of formal education. The aim of investigating the education level of the respondents is to access whether they will be in a position to provide reliable information that this study sought. Participants were asked to specify their educational level, and the results are presented in the table below.

Table 4.3
Education level of the respondents

Education	*Frequency*	*Percentage*
College	11	19
Undergraduate	21	36
Professional Qualification	18	31
Masters	8	14
Total	**58**	**100**

The questionnaire also assessed the respondents' level of education. As seen in the table above, the degree level was the most common at 36%, followed by a professional qualification at 31%, college certificates at 19%, and master's degrees at 14%. The study's findings indicate that respondents have knowledge of the questions, understand how to fill out the questionnaire, and provide effective answers because they understand the organizations, as evidenced by their education level.

4.2.3. Experience of the Respondents

The study aimed to ascertain the length of time the respondents had spent in public hospitals. This assists in determining respondents' level of experience in the management of public hospitals; it also assists in determining the strength and reliability of the data collected.

Table 4.4
Experience of the Respondents

	Frequency	Percentage
1-5 years	5	8
6-10 years	10	17
11-15 years	21	36
16-20 years	14	24
21 years and above	9	15
Total	**58**	**100**

According to the findings, 36 percent of respondents had worked in public hospitals for 11-15 years, 24 percent had worked in public hospitals for 16 to 20 years. It is also clear that 17% have worked or served in public hospitals for 6-10 years, while 15% have worked in public hospitals for more than 21 years. Similarly, 8% have worked at public hospitals between 1-5 years. This suggests that the majority of respondents have been in the service for a reasonable amount of time.

4.3. Descriptive Statistics

4.3.1. Control environment and performance of level 5 hospitals

The study used mean and standard deviation descriptive statistics to capture the responses based on the various indicators of study variables on a Likert scale of 1-5, where 5= Very great extent, 4= Great extent, 3 = Moderate extent, 2= Little extent, and 1= No extent. As a result, the average responses on each variable are presented in this section where standard deviation illustrates the extent of variation in the replies.

The findings indicated that a majority of respondents agreed that the hospital conducts auditing and audit-related activities in accordance with established standards (Mean = 4.41), The hospital's board and management committee are self-contained (Mean = 4.14) and agreed that to a great extent employee and management alike are dedicated to excellence and honesty (Mean=4.09) and that to direct behaviour, operations, and decision-making, the hospital has an organizational philosophy (Mean=4.07). The findings also showed that respondents agreed that to a great extent the hospital management is dedicated to upholding ethical standards in the healthcare industry (Mean=3.81).

The findings imply that in regard to control environment, hospitals are keen on control environment measures such as integrity, ethical values, and independence of audit committee (Average Mean=4.104). The findings are also supported by a low standard deviation which implies low variation in the opinions (STDev =0.626). According to Kinyua *et al.* (2015), the control environment factors include integrity and ethical values; commitment to competence; leadership philosophy and operating style; and the manner in which management assigns authority and responsibility, organizes, and develops its people. According to Mawanda (2018), there is a positive relationship between control environment and financial performance of institutions of higher learning in Uganda, as demonstrated by his case study of Uganda Martyrs University.

Table 4.5
Control Environment

Aspects of Control Environment	Mean	STDev
To direct behaviour, operations, and decision-making, the hospital has an organizational philosophy.	4.07	0.672
The hospital's management is dedicated to upholding ethical standards in the healthcare industry.	3.81	0.606
The hospital has auditing and audit-related activities that are driven by standards.	4.41	0.563
Employees and management alike are dedicated to excellence and honesty.	4.09	0.657
The hospital's board and management committee are self-contained.	4.14	0.634
Average	**4.104**	**0.626**

4.3.2. Risk management and performance of level 5 hospitals

The second objective of the study was to ascertain the effect of risk assessment on the performance of Nairobi county's level-5 public hospitals. Respondents were asked to rate their level of agreement with various risk

assessment statements on a scale of 1-5, with 5 indicating very effective, 4 indicating effective, 3 indicating moderately effective, 2 indicating slightly effective, and 1 indicating less effective. The results are presented in Table 4.6. The findings presented indicate that the respondents agreed to a very great extent that management has a set of guidelines for determining the fraud-related threats to the company are the most severe (Mean=4.26), management has placed in place measures to reduce the vital risks that may arise as a result of fraud (Mean=4.21). Respondent also indicated that to a very great extent management provides confidence that risks are being handled properly (Mean=4.19), Management recognizes risks that may jeopardize the accomplishment of the goals (Mean=4.16). Other areas of concern, such as excessive levels of risk, are subject to unplanned and informal assessments (Mean=4.02).

The findings imply that the constructs of risk management in the hospitals such as reserve for loss account receivable, evaluation of revenue cycle, and clear procedure on cash management (forms and documents) influence performance of level 5 hospitals in Kenya as shown by the average mean of 4.168. The findings are also supported by a low standard deviation which implies low variation in the opinions (STDev=0.654). According to a study by Muhunyo and Jagongo (2018) strong risk management systems have resulted in strong internal control mechanisms, which have resulted in high institution revenue, low operating costs, and high fees income, whereas weak and porous ones have resulted in poor performance of the institutions.

Table 4.6
Risk management

Aspects of Risk management	Mean	STDev
Management recognizes risks that may jeopardize the accomplishment of the goals.	4.16	0.644
Management has a set of guidelines for determining the fraud-related threats to the company that is the most severe.	4.26	0.637
Management has placed in place measures to reduce the vital risks that may arise as a result of fraud.	4.21	0.642
Management provides confidence that risks are being handled properly.	4.19	0.712
Other areas of concern, such as excessive levels of risk, are subject to unplanned and informal assessments.	4.02	0.635
Average	**4.168**	**0.654**

4.3.3. Control activities and performance of level 5 hospitals

The third objective of the study was to ascertain the effect of control activities on the performance of Nairobi county's level-5 public hospitals. Respondents were asked to rate their level of agreement with various

statements about the regulatory framework on a scale of 1-5 (5 indicating Very Large Extent, 4 indicating Large Extent, 3 indicating Moderate Extent, 2 indicating Low Extent, and 1 indicating Very Low Extent). The results are presented in Table 4.7. The results indicated that respondents agreed to a great extent that only staff with specific responsibilities have access to documents in the hospital accounting system (Mean=4.29), making entries, reviewing paperwork, and confirming records all have monitoring mechanisms in place at the hospital (Mean=4.10) as well as that different levels of risk in different groups have different limits (Mean=4.05). Respondents also agreed that to great extent the hospital has procedures in place for regular bank account reconciliation to ensure that there are no unpaid things that could result in losses (Mean=4.02) and that only approved staff with access to the hospital system are allowed to check on it (Mean=3.91).

The findings imply that control activities such as patient admission, records of patients, supplier payment approval mechanism, and verification of documents are effective in level five hospitals within Nairobi County as indicated by an average mean of 4.074. The findings are also supported by a low standard deviation which implies low variation in the opinions (Std Dev=0.6626). The study findings confirm a study by Ejoh and Ejom (2017) on the impact of internal control activities on the financial performance of tertiary institutions in Nigeria. The study revealed that there is a clear separation of roles where individuals are supposed to adhere to the laid procedure of the operation to ensure a smooth flow of the activities. In hospitals, individuals are given clear procedures to follow in their line of duties to ensure there is no confusion caused and that the performance of the facility is proceeding effectively.

Table 4.7
Control activities

Aspects of Control activities	Mean	STDev
Only approved staff with access to the hospital system are allowed to check on it.	3.91	0.629
Only staff with specific responsibilities have access to documents in the hospital accounting system.	4.29	0.593
Making entries, reviewing paperwork, and confirming records all have monitoring mechanisms in place at the hospital.	4.10	0.718
Different levels of risk in different groups have different limits.	4.05	0.711
The hospital has procedures in place for regular bank account reconciliation to ensure that there are no unpaid things that could result in losses.	4.02	0.662
Average	4.074	0.6626

4.3.4. Information and communication and performance of level 5 hospitals

The third objective of the study was to ascertain the effect of information and communicationon on the performance of Nairobi County's level-5 public hospitals. Respondents were asked to rate their level of agreement with various statements about the regulatory framework on a scale of 1-5 (5 indicating Very Large Extent, 4 indicating Large Extent, 3 indicating Moderate Extent, 2 indicating Low Extent, and 1 indicating Very Low Extent). The results are presented in Table 4.5. The results revealed that the respondents agreed to employees at the hospital are mindful of the value of internal controls (Mean=4.10), every section/unit in the hospital has a simple reporting structure that spells out who is responsible for what (Mean=4.05) as well as that The hospital has efficient communication networks that aid in the execution of various hospital activities (Mean=4.03).

The findings imply that the majority of public hospitals comply with information and communication aspects such as flowchart of the assignment, implementation procedure, and complain handling procedures in order to enhance their performance as indicated by the average mean score of 3.97. A standard deviation of 0.639 indicated a small variation in the responses regarding the performance of level five hospitals in relation to the aspects of information communication. According to Cristina and Cristina (2019), information communication is a critical component of an internal control system because it aids in the efficient and timely distribution of information. External and internal communication are both included. According to Abu Naser, Al Shobaki, and Ammar (2017), a good internal control system requires the availability of information as well as a clear and visible plan for communicating responsibilities and expectations. An essential component of these internal controls is the promise of confidentiality of information shared and obtained. Employees should feel free to express their concerns,

Table 4.8
Information and communication

Aspects of information and communication	Mean	STDev
Individuals tasked with overseeing operations to ensure proper coordination on internal controls has been established at the hospital.	3.83	0.625
Employees at the hospital are mindful of the value of internal controls.	4.10	0.640
The hospital has efficient communication networks that aid in the execution of various hospital activities.	4.03	0.748
Every section/unit in the hospital has a simple reporting structure that spells out who is responsible for what.	4.05	0.605
Anti-fraud policies and practices are well-communicated at the hospitals.	3.86	0.576
Average	**3.97**	**0.639**

discuss potential issues, and notify management of suspected infractions, thus, IC is key in internal control systems.

4.3.5. Monitoring activities and performance of level 5 hospitals

The study also endeavored to find out the influence of monitoring activities on the performance of level 5 hospitals in Kenya. The majority of the respondent agreed that in their institution's employees are responsible for the security of all assets assigned to them (Mean=4.33), communication between departments is documented for follow up, and that management in our organization appreciates the need for individual departments to work together to achieve overall organization objectives (Mean=4.17) in each case. Respondents also agreed that to a great extent institution carries out periodic counting of assets (Mean=4.12) and that organization has ensured all computers have passwords for login by respective assigned officers (Mean=4.00).

The findings imply that most public hospitals comply with monitoring activities aspects such as quality assessment, system effectiveness and a maintenance of inventory in order to enhance their performance as indicated by the average mean score of 4.15. A standard deviation of 0.618 indicated a small variation in the responses regarding the performance of level 5 hospitals in relation to the aspects of monitoring activities. Dhaliwal, Hogan, Trezevant, and Wilkins (2016) internal control is monitored through the use of both ongoing and separate evaluations. These monitoring processes determine whether other internal control components continue to function as designed and intended. Furthermore, Masli *et al.* (2010) pointed out that monitoring activities aid in the identification of internal control deficiencies and their communication to the appropriate officials responsible for corrective action.

Table 4.9
Monitoring activities

Monitoring activities	Mean	STDev
In our institution, employees are responsible for the security of all assets assigned to them	4.33	0.54251
Our organization has ensured all computers have passwords for login by respective assigned officers	4.00	0.67538
Our institution carries out periodic counting of assets	4.12	0.65098
In our organization, communication between departments is documented for follow up	4.17	0.62514
The management in our organization appreciates the need for individual departments to work together to achieve overall organizational objectives	4.17	0.59642
Average	**4.158**	**0.618**

4.4. Performance of level 5 public hospitals

The research sought to establish how the performance of the level five hospitals has been affected by the application of internal control elements in their operations. The study's findings indicate that hospital service delivery has improved (Mean=4.21), patient complaints have decreased, and hospitals have increased revenue collection, as indicated by a mean score of 4.10 in each case. Respondent also agreed that there are minimal cases of errors of operations reported and that there is increased number of patients seeking services in the hospital as shown by the mean scores of 4.05 and 4.00 respectively. On average respondents, it is clear that there is increased revenue collection, effective cash management, and clear cash reconciliation in the public hospitals due to internal control elements adopted.

Table 4.10
Performance of level 5 public hospitals

	Mean	*STDev*
There is increased revenue collection in our hospital	4.10	0.667
There is improved service delivery in our hospital	4.21	0.642
There is an increased number of patients seeking services in the hospital	4.00	0.675
The number of complaints from the patients has decreased	4.10	0.612
There is minimal cases of errors of operations reported	4.05	0.660
Average	**4.09**	**0.651**

4.5. Correlation analysis

A correlation analysis was done to determine the relationship between the study variables. The Pearson correlation coefficient was employed in this investigation to determine the relationship between the variables included in the study. Correlation analysis, according to Kumar (2011), displays the direction and degree of the link between variables and runs from -1 to +1. Table 4.11 displays the findings of the correlation analysis.

According to the findings in Table 4.11, the control environment has a positive and significant effect on the performance of Nairobi County's level-5 public hospitals (r = 0.288, Sig = 0.028 <0.05). This means that a unit increase in the control environment results in a significant improvement in the performance of Nairobi County's level-5 public hospitals. The findings also show that risk management has a positive and significant effect on the performance of Nairobi County's level-5 public hospitals (r =0.460, Sig = 0.000, <0.05). This suggests that risk management improves the performance of Nairobi County's level-5 public hospitals. It was also discovered that

control activities have a positive and significant effect on the performance of Nairobi County's level-5 public hospitals (r=0.115, Sig = 0.039, <0.05). This means that increasing control activities leads to an increase in the performance of Nairobi County's level-5 public hospitals. The performance of Nairobi County's level-5 public hospitals was found to have a positive and significant effect on information communication (r =0.140, Sig = 0.024, 0.05). This implies that improved information sharing leads to improved performance at Nairobi County's level-5 public hospitals. Monitoring activities have a favorable and statistically significant impact on the performance of Nairobi County's level-5 public hospitals (r = 360, Sig = 0.006, <0.05). This implies that a unit increase in monitoring efforts results in a significant improvement in the performance of Nairobi County's level-5 public hospitals.

Table 4.11
Correlation Analysis

		PER	CE	RM	CA	IC	MA
PER	Pearson Correlation	1					
	Sig. (2-tailed)						
CE	Pearson Correlation	.288*	1				
	Sig. (2-tailed)	0.028					
RM	Pearson Correlation	.460**	0.254	1			
	Sig. (2-tailed)	0.000	0.054				
CA	Pearson Correlation	0.115	0.137	0.098	1		
	Sig. (2-tailed)	0.039	0.304	0.463			
IC	Pearson Correlation	0.140	-0.17	0.109	-0.022	1	
	Sig. (2-tailed)	0.024	0.202	0.415	0.871		
MA	Pearson Correlation	.360**	-0.084	.298*	.313*	0.129	1
	Sig. (2-tailed)	0.006	0.532	0.023	0.017	0.333	

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

** Correlation is significant at the 0.01 level (2-tailed).

4.6. Diagnostic tests

The study performed diagnostic tests before employing an ordinary least square regression model to assess the study hypotheses. The tests include multicollinearity, heteroscedasticity, and normality tests. The test findings are presented in the subsections that follow.

4.6.1. Multicollinearity

A situation in which the correlation between the independent variables is more than 0.8 is referred to as multicollinearity. In such a circumstance,

the regression model's standard errors are inflated, resulting in incorrect coefficients for the regression model variables. These values are not predictive of the relationship between the independent and dependent variables. The study used the Variance Inflation Factor (VIF) approach to test for multicollinearity, with VIF values less than 10 being acceptable. Table 4…. shows the results for the VIF values. Control environment has a VIF value of 2.043, risk management has a VIF value of 3.701, control activities have a VIF value of 3.815, information and communication has a VIF value of 2.31, and monitoring activities have a VIF value of 2.365, according to the results. The numbers are less than 10, indicating that they fall below the criterion for lack of multicollinearity.

Table 4.12
Multicollinearity

	Collinearity Statistics	
	Tolerance	*VIF*
Control^^Environment^^	0.491	2.043
Risk^^management^^	0.273	3.701
Control^^activities^^	0.262	3.815
Information^^and^^Communication^^	0.435	2.3
Monitoring^^Activities^^	0.423	2.365

4.6.2. Heteroscedasticity

One of OLS's assumptions is that the error terms in the regression should be constant. As a result, this study looked for deviations from this premise (Heteroscedasticity). The Breusch Pagan method was utilized in this test, with a significance value of the probability chi square larger than 0.05 indicating the lack of heteroscedasticity. Table 4.13 summarizes the findings. The results showed that the Prob> Chi^2 value was (0.06 > 0.05), indicating that the constant variance null hypothesis was not rejected. As a result, the data was suitable for running an OLS regression.

Table 4.13
Heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for Heteroscedasticity	
Ho: Constant variance	
Variables: Fitted values of public hospital performance	
$Chi^2(1)$	6.50
Prob> Chi^2	0.061

4.6.3. Normality Test

The assumption of a classical linear regression model requires that the data assume a normal curve (Normal distribution). The Kolmogorov-Smirnova (K-S) test was used to determine the normality of the dependent variable. The null hypothesis in the Kolmogorov-Smirnova (K-S) test is that the data is normally distributed, while the alternative hypothesis is that the data is not normally distributed. Since the null hypothesis was not to be rejected, a significance value larger than 0.05 showed that the data was normally distributed.

Table 4.7 displays the results of the Kolmogorov-Smirnova (K-S) test. The results show that the statistic's significance was not significant (Sig = 0.152 > 0.05). The null hypothesis of normally distributed data was not rejected. As a result, the data for the dependent variable was regularly distributed.

Table 4.14
Normality test

Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	*df*	*Sig.*	*Statistic*	*df*	*Sig.*
Performance of public hospitals	0.176	58	0.052	0.951	58	0.061

Lilliefors Significance
Correction

4.7. Regression analysis

To establish the effect of the factors (control environment, risk assessment, control activities, information and communication, and monitoring activities) on the performance of level 5 hospitals in Nairobi County, Kenya, a multivariate regression model was adopted. The regression model was of the form below:

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \varepsilon$$

The estimation of the regression model has a model summary, ANOVA, and model coefficients. The results are presented and explained in the sub-sections that follow.

4.7.1. Model summary

The model summary results as presented in Table 4.15

Table 4.15
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.573	0.329	0.264	0.16744

a Predictors: (Constant), MA, CE, IC, CA, RM

Table 4.15 revealed that the three components of the control environment, risk assessment, control activities, information and communication, and monitoring activities had a good link with the performance of public hospitals in Nairobi County, Kenya (R=0.573). This implies that the five elements have a significant impact on the functioning of public hospitals. The R-square displays how well the independent variables explain the change in the dependent variable (performance of public hospitals) (control environment, risk assessment, control activities, information and communication, and monitoring activities). In this investigation, the R-square value, also known as the coefficient of determination, was 0.329. This means that the five factors account for up to 32.9 percent of the difference in the performance of public hospitals (control environment, risk assessment, control activities, information and communication, and monitoring activities). Other than the five components, the remaining amount, 67.1 percent, is explained by other factors. The model, on the other hand, was a good fit.

4.7.2. ANOVA

Analysis of Variance (ANOVA) was done to determine the significance of the regression model used. ANOVA shows the difference between the anticipated and real regression models. Table 4.16 displays the ANOVA results. The F statistic value was significant (F =5.092, P-Value = 0.001 0.05), indicating that the overall regression model to determine the effect of the factors (control environment, risk assessment, control activities, information and communication, and monitoring activities) on level 5 public hospital

Table 4.16
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.714	5	0.143	5.092	.001
	Residual	1.458	52	0.028		
	Total	2.172	57			

a Dependent Variable: LogPER
b Predictors: (Constant), LogMA, LogCE, LogIC, LogCA, LogRM

performance was fit. The regression model verifies the five factors' applicability as major internal control elements in influencing public hospital performance.

4.7.3. Regression model coefficients

Table 4.17 shows the regression findings that were used to determine the beta coefficients, constants, and their significance. The study determined the model's relevance by employing both P values and critical t values. A variable had a significant effect on level 5 public hospital performance if the p-value was less than 0.05 and the critical t value was more than absolute 1.96. The null hypothesis was rejected in this situation. Table 4.17displays the regression model coefficients.

Table 4.17
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.04	.698		.057	.955
	CE	.295	.139	.261	2.117	.039
	RM	.326	.137	.299	2.379	.021
	CA	-.032	.102	-.038	-.316	.753
	IC	.127	.131	.114	.970	.337
	MA	.266	.117	.290	2.264	.028

a. Dependent Variable: PER

$Y = 1.04 + 0.295X_1 + 0.326 X_2 - 0.032 X_3 + 0.127 X_4 + 0.266 X_5$

Y = Organizational performance, X_1 = Control environment, X_2 = Risk assessment, X_3 = Control Activities, X_4 = Information and Communication, X_5 = Monitoring activities

Other components (control environment, risk assessment, control activities, information and communication, and monitoring activities) are held constant at zero in the regression model, indicating that the performance of a level 5 public hospital is positive at 1.040. However, the performance of a level 5 public hospital improves with the introduction of a controlled environment, risk assessment, information and communication, and monitoring activities, whereas the introduction of information and communication affects the performance of a level 5 public hospital.

The results also show that the control environment has a positive and statistically significant effect on the performance of a level 5 public hospital (B = 0.295; t = 2.117, > 1.96, = P-Value = 0.020< 0.05). According to the findings, the controlled environment has a considerable impact on the performance of a level 5 public hospital. This means that when integrity, ethical standards, and an independent audit committee are integrated into the operations of public hospitals, their performance will dramatically increase. The findings are consistent with the findings of a study by Kamau (2014) conducted the effect of control environment on the organizational performance of Kenyan manufacturing firms. The study established that the control environment and organizational performance of manufacturing firms in Kenya have a positive relationship. According to the research, internal and external auditors should be kept up to date on international financial reporting standards (IFRS) and principles on a regular basis to develop their knowledge and skills in applying accounting practices, as well as keep updated on current issues. The findings are also consistent with the findings of a study by Irene and Bunyasi (2017) that investigated the impact of information systems and control environment on the financial performance of the Ministry of Labor, Social and Security Services. According to the study report, internal control systems, as well as information systems and control environments had a positive effect on Kenyan state-owned companies' financial results.

The results indicate that risk management has a positive and significant effect on performance of a level 5 public hospital (B =0.326; t =2.379, >1.96, = P-Value = 0.210, >0.05). These results mean that risk management has a significant effect on the performance of a level 5 public hospital. This implies that when reserving for loss account receivable, evaluation of revenue cycle and clear procedure on cash management (forms and documents) are adopted in the health facilities there is improved performance of a level 5 public hospital. The findings of this study are consistent with that of Ayimposa *et al.* (2020) did a study on the effect of risk assessment, control environment, and control activities on listed bank output in Ghana. According to the results of the study, risk management has a strong significant effect on organizational performance. The study's practical implications are that risk areas must be closely studied when assessing bank performance in order to reduce or remove their negative impact on bank performance. The study finding also conforms to Mutuku (2016) investigated the impact of risk management on Kenyan commercial banks' organizational performance. According to the study, risk management activities had a positive impact on commercial bank organizational performance.

The findings also indicate that control activities have a negative and insignificant effect on the performance of a level 5 public hospital (B=-0.032; t=-0.316, <1.96, P-Value 0.753, >0.05). This implies that patients' admission, supplier payment approval mechanism, and verification of documents play an insignificant role in enhancing the performance of a level 5 public hospital in Nairobi County. Thus there are other aspects of control activities that influence health facilities' performance. These findings contradict the findings of Bett and Memba (2017) focused on Menengai to examine the effect of internal control on the organizational performance of Kenyan processing firms. The control climate, risk evaluation, and knowledge all have a direct impact on Menengai Company's financial results, according to ANOVA tests. However, a study carried out by Murti and Kurniawan (2020) on the effects of internal control activities on local government performance demonstrated that control activities have a partial effect on local government performance

The results reveals that information communication has a positive and significant effect on the performance of a level 5 public hospital in Nairobi County (B =0.127; t = 0.970, <1.96, = P-Value = 0.337,>0.05). The results mean that information communication has a significant effect on the on performance of a level 5 public hospital in Nairobi County. The findings imply that when the flowchart of the assignment, implementation procedure, and complaints handling procedures are incorporated in operations of health facilities the performance of a level 5 public hospital in Nairobi County improves. Oussii and Taktak (2018) did a study on the impact of internal audit function features on internal control quality. Monitoring of information and communication had a statistically significant impact on the quality of audit reports. A study by Muhunyo and Jagongo (2018) revealed that information and communication methods have a significant impact on the revenue, operational costs, and fees income of institutions of higher learning, according to the report. According to Muchoki (2020), information communication has a positive and significant effect on the amount of revenue collection at NTSA.

Finally, the study established that monitoring activities have a positive and significant effect on the performance of a level 5 public hospital in Nairobi County (B =0.266; t =2.264, <1.96, = P-Value 0.028, <0.05). This means that monitoring activities have a significant effect on the performance of a level 5 public hospital in Nairobi County. The findings illustrate that when quality assessment, system effectiveness, and maintenance of inventory are enhanced in operations of health facilities the performance of a level 5 public hospital in Nairobi County improves. The findings conform to Simangunsong's (2014) study that was conducted on the effects of monitoring activities on the effectiveness of local government efficiency.

The study revealed that monitoring activities had a positive effect on local government performance both concurrently and to some extent, according to the findings. Additionally, Mwakimasinde, Odhiambo, and Byaruhanga (2017) examined the financial output of Kenyan sugarcane out-grower companies in relation to monitoring activities. The findings reveal that there was a positive and statistically significant relationship between monitoring activities and the performance of Kenyan sugarcane companies.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Based on the study findings, the following conclusions are made –

The main objectives of the present study was to determine effect of control environment, risk management, control activities, information and communication, and monitoring activities on the performance of level-5 public hospitals in Nairobi county. The regression findings showed that control environment, risk management, information and communication, and monitoring activities have a positive and statistically significant effect on the performance of a level 5 public hospital. While control activities have a negative and an insignificant effect on performance of a level 5 public hospitals.

Furthermore, control environment indicated that auditing and audit-related activities are driven by standards in public hospitals, the hospital has an organizational philosophy that direct behaviour, operations, and decision-making, and that hospital's board and management committee are self-contained. Management has placed in place measures to reduce the vital risks that may arise as a result of fraud and that management provides confidence that risks are being handled properly. Additionally, the only staff with specific responsibilities have access to documents in the hospital accounting system, making entries, reviewing paperwork, and confirming records all have monitoring mechanisms in place at the hospital. The institutions' employees are responsible for security of all assets assigned to them, communication between departments is documented for follow up and that management appreciates the need for individual departments to work together to achieve overall organization objectives. It means that the quality assessment, system effectiveness, and maintenance of inventory are implemented efficiently.

Lastly, the control mechanisms related to making entries, reviewing paperwork, confirming records, procedures for regular bank account reconciliation, and risk assessment are duly in place in these hospitals.

5.2. Recommendations

Based on the study findings, the following recommendations are made-

The organization's strategic direction and priorities should be established, as they will serve as the foundation for the development of risk assessment and operational effectiveness. Thus, administrators must establish objectives before identifying and addressing risks. Operations objectives are concerned with the effectiveness and efficiency of operations, including meeting performance and financial targets and safeguarding assets against loss. Financial reporting objectives are concerned with the preparation of reliable published financial statements, as well as the prevention of financial reporting fraud. Compliance objectives are concerned with laws and regulations that establish minimum standards of conduct.

Risk identification and analysis is a continuous process that is critical to the effectiveness of an internal control system. At all levels, attention must be paid to risks and necessary measures taken to manage them. Risks can arise as a result of both internal and external factors. After identifying risks, they must be evaluated. Change management necessitates a continuous assessment of risk and its impact on internal controls. As a result, mechanisms are required to detect and respond to changing conditions.

Control activities such as policies and procedures are necessary to ensure that management directives are followed. This ensures that necessary actions are taken to address risks to the entity's objectives being attained. Control activities occur at all levels and in all functions of the organization. They encompass a broad range of activities, including approvals, authorizations, verifications, reconciliations, operational performance reviews, asset security, and segregation of duties. All policies must be implemented with care, diligence, and consistency.

Relevant information must be identified, captured, and communicated in a manner and time frame that enables individuals to fulfil their responsibilities. Effective communication must be distributed throughout the organization, flowing down, across, and up. Top management must send a strong message to all employees that control responsibilities must be taken seriously. They must comprehend their own role within the internal control system, as well as the relationship between their own activities and the work of others. They must be able to communicate vital information upstream.

Internal control systems must be monitored - a process that determines the system's overall performance quality over time. Continuous monitoring

occurs in the normal course of business and includes routine management and supervisory activities, as well as other actions taken by employees in the performance of their duties that evaluate the quality of internal control system performance. Internal control deficiencies should be reported upstream, with serious issues being brought to the attention of top administration and governing boards immediately. Due to changing circumstances, management must assess whether the internal control system remains relevant and capable of addressing new risks.

5.3. Direction for future research

There is also a need to determine whether similar findings can be achieved when mixed methods of research are adopted because this study made use of quantitative primary data only. Other methods such as qualitative analysis through interviews can also be adopted by other studies in order to give a more in-depth analysis and findings.

In addition, given that the study was conducted in Nairobi County only whereas we have other level-5 public hospitals across the country. Therefore, there is a need to carry out a study focusing on all level five hospitals across the country in order to give a clear picture of the real situation.

CONFLICT OF INTEREST

There is no conflict of interest in the publication of this research paper.

REFERENCES

Abbasi, S. M., & Hollman, K. W. (2000). Turnover: The real bottom line. *Public personnel management*, 29(3), pp. 333-342.

Abdusalomova, N. (2020). Principles of ties of internal control and management accounting systems at the enterprises of black metallurgy. *Àðõèâ íàó÷íûõ èññëåäîâàíèé*, (2).

Abu Naser, S. S., Al Shobaki, M. J., & Ammar, T. M. (2017). Impact of Communication and Information on the Internal Control Environment in Palestinian Universities. *Available at SSRN 3085429*.

Aksom, H., & Tymchenko, I. (2020). How institutional theories explain and fail to explain organizations. *Journal of Organizational Change Management*. 6(33), pp. 1223-1252.

Armstrong, M. (2014). *Armstrong's Essential Human Resource Management Practice*. 13th ed. London Kogan Page.

Bett, J. C., & Memba, F. S. (2017). Effects of internal control on the organizational performance of processing firms in Kenya: A case of Menengai company. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)*, 4(1), pp.11-22.

Cheruiyot, P.M., Namusonge, G.S., & Sakwa, (2018). Influence of internal control practices on performance of county governments in Kenya. *International journal of science and information technology* 4(9), pp. 224-234.

Cooper, R.D & Schindler, P.S (2014) *Business Research Methods*. 12th ed. McGraw-Hill education.

Cristina, P., & Cristina, B. A. (2019). Information and communication in banks-key elements of the internal control system: An empirical analysis between Romanian, American and Canadian models of control. *Annals of Faculty of Economics*, 3(1), pp. 1091-1096.

Dhaliwal, D., Hogan, C., Trezevant, R., & Wilkins, M. (2016). Internal control disclosures, monitoring, and the cost of debt. *The Accounting Review*, 86(4), pp. 1131-1156.

Ejoh, N., & Ejom, P. (2017). The impact of internal control activities on financial performance of tertiary institutions in Nigeria. *Journal of Economics and Sustainable Development*, 5(16), pp. 133-143.

Etengu, R. O., &Amony, M. (2016). Internal control system and organizational performance in non-governmental organisations in Uganda: A case study of international union for conservation of nature. *International Journal of Contemporary Applied Sciences*, 3(2), pp. 2308-1365.

Urquia, L. G. M. (2018). Effects of internal control system on financial performance in an institution of higher learning. *Journal of Fundamental and Applied Sciences*, 10(3S), pp. 110-125.

Jensen, M.C. & Meckling, W.H. (1976): Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), pp. 305-360.

Kabuye, F., Kato, J., Akugizibwe, I., & Bugambiro, N. (2019). Internal control systems, working capital management and organizational performance of supermarkets. *Cogent Business & Management*, 6(1), pp. 1573524.

Kinyua, J. K., Gakure, R., Gekara, M., & Orwa, G. (2015). Effect of internal control environment on the organizational performance of companies quoted in the Nairobi Securities Exchange. *International Journal of Innovative Finance and Economics Research*, 3(4), pp. 29-48.

Kinyua, J. K., Gakure, R., Gekara, M., & Orwa, G. (2015). Effect of internal control environment on the financial performance of companies quoted in the Nairobi Securities Exchange. *International Journal of Innovative Finance and Economics Research*, 3(4), 29-48.

Kinyua, J. K. A. (2016). *Effect of internal control systems on financial performance of companies quoted in the Nairobi securities exchange* (Unpublished Doctoral dissertation, Jomo Kenyatta University of Agriculture and Technology).

Murti, A. K., & Kurniawan, T. (2020). *Implementation and Impact of Internal Control in Preventing Fraud in the Public Sector*. ICAS-PGS 2020, Depok. Indonesia.

Lagat, F. K. (2017). Effect of risk evaluation on performance of financial institutions. *Journal of Accounting*, 2(1), pp. 54-68.

Luo, Y., & Bu, J. (2016). How valuable is information and communication technology? A study of emerging economy enterprises. *Journal of world business*, 51(2), pp. 200-211.

Mabonga, S. (2017). *Effects of devolution on childbirth services in level four public hospitals in Nairobi County.* (Unpublished Masters Dissertation, Catholic University of East Africa).

Masli, A., Peters, G. F., Richardson, V. J., & Sanchez, J. M. (2010). Examining the potential benefits of internal control monitoring technology. *The Accounting Review*, *85*(3), pp. 1001-1034.

Mongare, M. E., & Nasidai, S. E. (2016). The Impact of Information Communication Technology on inventory control systems in transport organization: a case study of Kenya Ferry Services. *European Journal of Logistics*, 2(1), pp. 17-41.

Mugenda O.M & Mugenda A.G (2013). *Research Methods: Quantitative and Qualitative Approaches.* Nairobi Acts Press

Muhunyo, B. M., & Jagongo, A. O. (2018). Effect of internal control systems on financial performance of public institutions of higher learning in Nairobi City County, Kenya. International *Academic Journal of Human Resource and Business Administration*, 3 (2), pp. 27-87.

Muhunyo, B. M., & Jagongo, A. O. (2018). Effect of internal control systems on financial performance of public institutions of higher learning in Nairobi City County, Kenya. *International Academic Journal of Human Resource and Business Administration*, 3 (2), pp. 273-287.

Muhunyo, B. M., & Jagongo, A. O. (2018). *Effect of internal control systems on organizational performance of public institutions of higher learning in Nairobi City County, Kenya.* (Unpublished Doctoral dissertation, Kenyatta University).

Muhunyo, B.M. (2018). Effect of internal control systems on organizational performance of public institutions of higher learning in Kenya, a thesis submitted to Jomo Kenyatta University of Agriculture and Technology, *International Academic Journal of Economics and Finance*, 3(2), pp. 273-287.

Mustafa, O. A. (2019). Assessment of the organizational performance of Islamic commercial banks in Sudan under credit risk and inflation pressures (1995-2017). *Journal of Islamic Banking and Finance*, 7(1), 14-26.

Mutuku, C. (2016). *The effect of risk management on the financial performance of commercial banks in Kenya* (Unpublished Doctoral dissertation, University of Nairobi).

Mwakimasinde, M (2014): effects of internal control systems on organizational performance of sugarcane out growers in Kenya. *Journal of business and management*1(2), pp. 62-73.

Mwangi H (2012). *The Effect of Agent Banking On Financial Inclusion in Kenya.* (Unpublished Masters Dissertation, University of Nairobi).

Newman, W., Charity, M., & Faith, S. (2018). Effectiveness of risk management systems on organizational performance in a public setting. *Academy of Accounting and Financial Studies Journal*, 22(4), pp. 1-17.

Ngantchou, P. N. (2016). *Impact of the Information and Communication Technologies on workers' behaviours: An experimental investigation* (Doctoral dissertation, Université Montpellier).

Ngari, G.M. (2017). The effect of internal controls on organizational performance of microfinance institutions in Kenya. *International academic Journal of Economics and Finance* 2(3), pp. 112-140.

Njagi, A. W. (2018). *Effect of internal controls on revenue collection of level five hospitals in Kiambu County*, (Masters Dissertation, University of Nairobi).

Njeri, C. K. (2014). *Effect of internal controls on the organizational performance of manufacturing firms in Kenya*. (Masters Dissertation, University of Nairobi).

Olanrawaju, Y. E. (2019). *Governance Control Practices and Performance of Nigerian Public Sector Entities* (Doctoral dissertation, Kwara State University, Nigeria).

Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, *10*(1), pp. 74-95.

Qiu, Y., Shaukat, A., & Tharyan, R. (2016). Environmental and social disclosures: Link with corporate organizational performance. *The British Accounting Review*, *48*(1), pp. 102-116.

Ibrahim, S., Diibuzie, G., & Abubakari, M. (2017). The impact of internal control systems on financial performance: The case of health institutions in upper west region of Ghana. *International Journal of Academic Research in Business and Social Sciences*, 7(4), pp. 684-696.

Sibanda, M. M., Zindi, B., & Maramura, T. C. (2020). Control and accountability in supply chain management: Evidence from a South African metropolitan municipality. *Cogent Business & Management*, *7*(1), 1785105.

Simangunsong, T. (2014). The impact of internal control effectives and internal audit towards the performance of local government. *Research Journal of Finance and Accounting*, 5(7), pp. 50-58.

Wakiriba, J.W., Ngahu, S & Wagoki, J. (2014). Effects of financial controls on financial management in Kenya's public sector: A case of national departments. Journal of business and management 16 (10), pp. 10-115.

Wangmo, T., & Provoost, V. (2017). The use of empirical research in bioethics: a survey of researchers in twelve European countries. *BMC medical ethics*, *18*(1), pp. 1-11.

Woods, M. (2009). A contingency theory perspective on the risk management control system within Birmingham City Council Management Accounting Research, 20 (1), pp. 68–91.