Forensic Auditing and Finance Fraud Risk Mitigation in Lake Victoria South Water Works Development Agency (LVSWWDA) Kenya

Article history: *Revised format: 4th Jan 2025, Available online: 16th May 2025*

Steve Apollo Osiare[1]; Dr. John Nyamiobo[2]

Abstract:

Purpose: *The study aimed to establish the relationship between forensic auditing and financial fraud risk mitigation among state corporations, with a specific focus on the Lake Victoria South Water Works Development Agency (LVSWWDA).*

Material/methods: *The study targeted 150 staff members across various organizational levels—senior management, middle management, and junior staff. A sample of 109 respondents was determined using Yamane's formula and selected through stratified random sampling to ensure balanced representation. Data were collected using a structured Likert-type questionnaire and analyzed using descriptive statistics (frequencies, means, standard deviations) and inferential statistics (correlation and regression analysis).*

Findings: *The results indicated that internal control systems and the regulatory framework had a statistically significant and positive influence on financial fraud risk mitigation. These elements were critical in enhancing the organization's ability to detect and prevent fraudulent activities.*

Conclusion*: The study concludes that robust forensic auditing practices—particularly strong internal controls and adherence to regulatory standards—are essential for mitigating financial fraud risks in state corporations such as LVSWWDA.*

Value: *This study provides empirical evidence supporting the role of forensic auditing in public sector financial governance. It offers practical recommendations for improving internal controls, ensuring regulatory compliance, and adopting modern forensic tools and training to strengthen fraud detection and prevention mechanisms in state-owned enterprises.*

Keywords*: Forensic Auditing, Finance Fraud Risk Mitigation, State Corporations, Internal Control Systems, Regulatory Framework*

Paper Type: *Research Article*

Recommended citation: Osiare, S. A., & Nyamiobo, J. (2025). Forensic auditing and finance fraud risk mitigation in Lake Victoria South Water Works Development Agency (LVSWWDA), Kenya. *Journal of Economics, Management Sciences and Procurement*, *4*(1), 180–191.

1.1. Introduction

Fraud and corruption in state-owned enterprises (SOEs) pose a persistent threat to public sector effectiveness worldwide, as these entities often control vast public resources yet suffer from weak oversight, inadequate internal controls, and limited

[1] Msc Student , Jomo Kenyatta University and Technology

[2] Jomo Kenyatta University and Technology

forensic audit capacity. Globally, more than half of both private and public organizations report fraud incidents (ACFE, 2020), prompting robust responses such as the U.S. Sarbanes–Oxley Act and the U.K. National Audit Office's stringent public sector audits. These measures have demonstrated forensic auditing's vital role in detecting and deterring fraud before it inflicts greater damage, underscoring its importance to sound financial governance across diverse economies.

Despite these advances, developing countries continue to grapple with more severe fraud challenges, exacerbated by institutional inefficiencies, political interference, and poor regulatory enforcement (World Bank, 2019). In sub-Saharan Africa, public sector corruption drains an estimated $148 billion annually (AfDB, 2018), with high-profile scandals at South Africa's Eskom illustrating both the scale of the problem and the promise of forensic audits under the Public Audit Act. Yet countries like Uganda and Tanzania, even after introducing forensic auditing, still face rising mismanagement due to weak controls and oversight, highlighting the need for sustained capacity building and stronger enforcement.

In Kenya, state corporations lose roughly KSh 21 billion each year to fraud (EACC, 2021), and 40 percent of these entities carry unresolved audit queries tied to mismanagement (Auditor-General, 2020). Over half lack adequate fraud-risk measures and 70 percent cannot perform comprehensive forensic audits (ICPAK, 2019). Although the Public Finance Management and Procurement Acts establish a regulatory framework, weak compliance and enforcement have undermined efforts to curb fraud. In the Lake Region—covering Kisumu, Homa Bay, Kakamega, and Migori—state corporations such as the Kisumu Water and Sewerage Company face chronic financial irregularities and scant forensic audit capacity, yet little research has examined how these local characteristics shape fraud risk mitigation.

Particularly concerning is the Lake Victoria South Water Works Development Agency (LVSWWDA), which has recurrent audit queries over misappropriation, irregular procurement, and unsupported expenditures (OAG, 2023). Conventional audits and internal controls have failed to root out sophisticated fraudulent schemes, suggesting an urgent need for forensic audit techniques—like digital forensics and data analytics—in conjunction with stronger regulatory enforcement. Existing Kenyan studies have focused on traditional audits (Gikonyo, 2015; Otieno, 2017) and general capacity gaps (World Bank, 2020), but have not thoroughly investigated how resource constraints and forensic methods interact within agencies like LVSWWDA.

This study therefore addresses a critical gap by examining the relationship between forensic auditing practices and financial fraud risk mitigation at LVSWWDA. By analyzing how internal control systems, regulatory frameworks, forensic techniques, and resource allocation jointly influence fraud detection and prevention, it aims to inform both theory and practice. The findings will guide policy enhancements, strengthen audit functions, and ultimately improve financial governance and service delivery within this—and potentially other—Kenyan state corporations.

1.2. Theoretical Review

The DiMaggio and Powell's Institutional Theory (1983) argues that organizations do not operate in isolation but are profoundly shaped by their broader institutional environments—regulatory frameworks, cultural norms, and policy regimes—that exert coercive, mimetic, and normative pressures on their structures and practices. In the public sector, statutes such as Kenya's Public Finance Management Act (2012) and the Leadership and Integrity Act (2012) exemplify coercive pressures that compel state agencies to adopt robust fiduciary mechanisms and internal controls, not only to enhance efficiency but also to secure legitimacy and public trust. Institutional Theory helps explain why state corporations often mirror one another's compliance strategies—through policy adoption and auditing protocols—even when these may offer limited operational advantage, since conformity to external expectations can be more critical for survival and reputation than innovation. However, the theory's emphasis on homogeneity and external pressures may understate the role of individual agency and organizational dynamism, leaving unanswered why some entities persist in fraudulent behavior despite stringent regulations. In this study of the Lake Victoria South Water Works Development Agency (LVSWWDA), Institutional Theory frames our inquiry into how regulatory mandates and normative expectations drive the adoption and effectiveness of forensic auditing and internal control systems in combating financial fraud.

By contrast, Cressey's Fraud Triangle Theory (1953) provides a micro-level lens for understanding the individual motivations underpinning fraudulent acts, identifying three interrelated conditions—pressure, opportunity, and rationalization—that must coexist for fraud to occur. "Pressure" refers to an individual's financial or personal stress that motivates deceit; "opportunity" arises from weaknesses in internal controls or oversight; and "rationalization" allows perpetrators to justify their misconduct as necessary or harmless. While this model has been invaluable for guiding reforms—especially in tightening control environments to eliminate opportunities—it tends to overlook broader systemic and cultural factors that may enable or tacitly condone fraud. In applying the Fraud Triangle to LVSWWDA, this study focuses particularly on mitigating "opportunity" through enhanced forensic auditing practices, thereby disrupting the conditions that facilitate fraud. By integrating both Institutional Theory and the Fraud Triangle, our research offers a comprehensive framework that links macro-level regulatory forces with individual risk factors, illuminating how strengthened institutional compliance and targeted forensic measures together can reduce fraud vulnerability in public sector organizations.

1.3. Conceptual Framework

the conceptual framework explores the influence of internal control systems, regulatory frameworks allocation on fraud risk mitigation among state corporations in the Lake Region of Kenya. The framework also demonstrates how these variables interact to mitigate fraud risks within the state corporations.

Independent Variables **Dependent Variable**

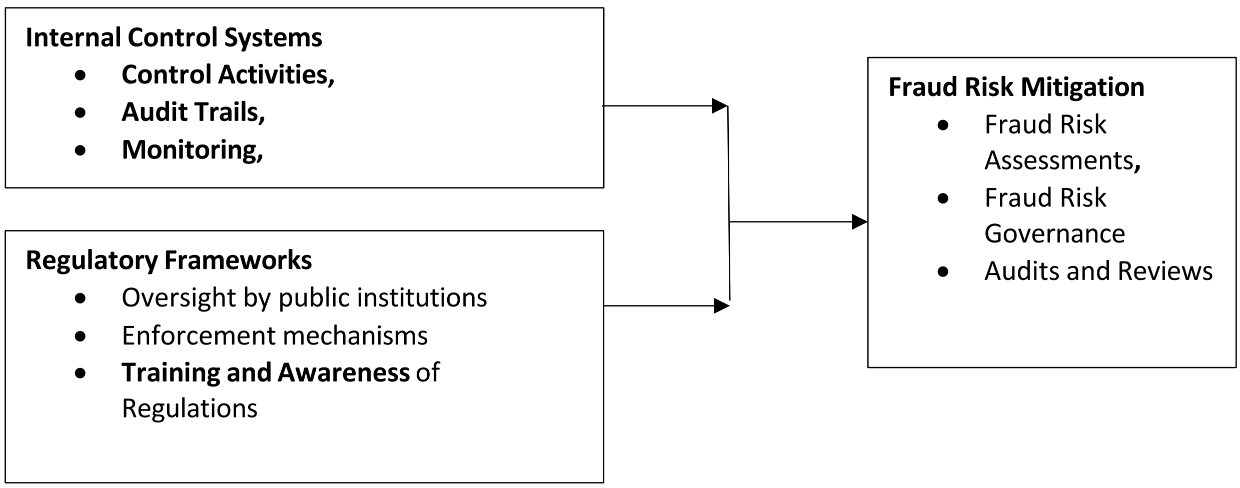

***Figure 1**: Conceptual Framework*

2.1. Empirical Review

2.1.1. Internal Control Systems and Fraud Risk Mitigation

The relationship between internal control systems and fraud risk mitigation has been extensively studied in both public and private organizations globally. Internal control systems play a critical role in preventing, detecting, and responding to fraudulent activities. A study by Apostolou *et al.* (2001) explored the role of internal controls in preventing fraud in large organizations and found that strong internal control systems are essential for mitigating fraud risks. They identified key control mechanisms such as segregation of duties, independent audits, and effective internal monitoring systems, all of which serve to reduce the opportunity for fraud.

In the United States, the Sarbanes-Oxley Act (2002) emphasized the importance of internal control systems for fraud prevention in public companies. Ketz (2003), examining the impact of Sarbanes-Oxley, found that after its enactment, public companies strengthened their internal controls, which in turn led to a reduction in corporate fraud. This legislation focused on increasing the rigor of internal controls and led to the establishment of more robust fraud risk mitigation strategies.

Krishnan (2005) studied the impact of internal controls on fraud prevention in financial institutions and found that organizations with better internal control systems were less prone to fraud-related losses. The study argued that regular audits, effective reporting systems, and transparent governance structures all contribute to reducing fraud opportunities.

In Africa, studies have also highlighted the significance of internal control systems in reducing fraud in state-owned enterprises and public sector organizations. Nguyen (2014) conducted a study on the role of internal control systems in the public sector in Uganda and concluded that ineffective internal controls were a major factor contributing to the prevalence of fraud. The study emphasized the importance of strengthening internal audit functions, implementing better financial reporting systems, and enforcing clear fraud prevention policies to reduce risks.

A study conducted by Makworo & Kanyingi (2013) in Kenya explored the effectiveness of internal control systems in mitigating fraud within state corporations. Their findings showed that while many state corporations had internal control systems in place, the systems were often weak or inconsistently applied, allowing for fraud to occur. They highlighted the lack of regular audits, poor segregation of duties, and inadequate reporting mechanisms as key weaknesses. This resulted in state corporations facing significant financial losses due to fraud.

Kiprotich (2015) conducted research in Kenya on the role of internal control systems in preventing financial mismanagement in public entities. The study revealed that while state corporations had some form of internal control, the lack of strict enforcement and accountability mechanisms made it difficult to prevent fraudulent activities. The research recommended strengthening audit functions, improving staff training, and creating independent oversight bodies to reduce fraud risks in these organizations.

A study by Mutunga (2017), focusing on public institutions in Nairobi, found that the strength of internal control systems directly correlated with a reduction in fraud and financial mismanagement. Mutunga's research found that organizations with well-structured internal controls, including segregation of duties, regular audits, and comprehensive risk management frameworks, were better equipped to prevent fraud. The study highlighted that even though some institutions had strong internal controls, the lack of a comprehensive fraud risk mitigation policy undermined the effectiveness of these controls.

2.1.2. Regulatory Framework Fraud and Fraud Risk Mitigation

The relationship between regulatory frameworks and fraud risk mitigation is central to ensuring that organizations, particularly state corporations, comply with laws and regulations aimed at reducing fraud. A robust regulatory environment provides guidelines for fraud prevention, detection, and response mechanisms. A study by Cohen and Wooten (2011) examined the impact of regulatory frameworks on corporate governance and fraud prevention in U.S. corporations. The study found that regulatory frameworks, such as the Sarbanes-Oxley Act (2002), played a significant role in improving corporate accountability and reducing fraud risk. The Act mandated more rigorous internal controls and increased oversight, which led to a decrease in corporate fraud cases. The authors concluded that strong regulatory frameworks not only foster transparency but also enhance trust and reduce the opportunity for fraudulent behavior.

In the United Kingdom, a study by Schwartz (2009) assessed the role of regulatory frameworks in fraud prevention across financial institutions. The study concluded that strict regulatory requirements, such as anti-money laundering (AML) laws and fraud reporting mechanisms, significantly improved the ability of organizations to detect and mitigate fraud. The study highlighted that regulatory frameworks, when effectively enforced, create a compliance culture that deters fraudulent activities.

Tayeb (2015) explored how the Foreign Corrupt Practices Act (FCPA) and anti-bribery laws in the United States influenced the behavior of multinational corporations. The study found that a strong regulatory environment made companies more likely to implement anti-fraud programs, increase internal audits, and improve transparency in financial reporting. The regulatory pressure led to an overall reduction in fraud risk across the organizations studied.

In Africa, several studies have examined how regulatory frameworks influence fraud mitigation strategies in state corporations and public enterprises. For example, Sibanda (2016) analyzed the effectiveness of regulatory frameworks in combating fraud in state-owned enterprises (SOEs) in South Africa. The study found that while the Public Finance Management Act (PFMA) and King IV Corporate Governance Code were designed to prevent fraud, their effectiveness was compromised by weak enforcement mechanisms and lack of proper oversight. The study emphasized that a strong regulatory framework, coupled with effective enforcement, was critical in reducing fraud risk in public enterprises.

Obiero (2017) conducted a study on the role of regulatory frameworks in fraud prevention in Kenya's public sector. The research found that while Kenya had established regulatory frameworks such as the Public Procurement and Disposal Act and the Public Audit Act, compliance levels among state corporations were low. The study argued that this non-compliance was due to inadequate enforcement of these frameworks, which allowed fraud to persist in many state corporations. The study concluded that regulatory frameworks alone were insufficient unless backed by strong enforcement mechanisms and a commitment to transparency and accountability.

3.1. Research Methodology

This study adopted a combined descriptive and correlational research design to map and analyze fraud risk mitigation practices in state corporations without altering the natural setting, while also measuring the relationships between key variables—internal control systems, regulatory frameworks, forensic audit techniques, and resource allocation—and the effectiveness of fraud prevention. The target population comprised 150 finance, procurement, audit, compliance, senior management, and forensic audit staff at the Lake Victoria South Water Works Development Agency, from which a purposive sample of 109 respondents was drawn using Yamane's formula to ensure both relevance and statistical reliability. Data were collected via a structured questionnaire—refined through a pilot study and expert review to bolster content validity—and administered using a drop-and-pick approach to maximize response rates. Instrument reliability was confirmed through Cronbach's alpha testing, with poorly correlating items revised or removed, while validity was further assured through face, construct, and criterion-related assessments. Collected data were entered into SPSS for descriptive statistics to portray the frequency, types, and measures of fraud mitigation practices, and inferential analyses including correlation and regression to identify the strength and direction of associations among variables, complemented by thematic analysis of any qualitative feedback; this rigorous methodology thus provided comprehensive, credible insights into how strengthened institutional controls and targeted forensic auditing drive more effective fraud risk mitigation in public sector organizations.. The prediction of Y was accomplished by the following regression model:

$Y=\beta0 + \beta1X1 + \beta2X2 + \mathcal{E}$
Where:
Y = Fraud Risk Mitigation
X1 = Internal Control Systems
X2 = Regulatory Framework
$\beta0$, $\beta1$, $\beta2$, $\beta3$ and $\beta4$ = Regression Coefficients for the independent variables
$\mathcal{E}$ = Error term

4.1. Results And Discussion

A total of 109 questionnaires were distributed to respondents across various departments within the Lake Victoria South Water Works Development Agency (LVSWWDA). Out of these, 96 questionnaires were correctly filled and returned, resulting in a response rate of 88%. According to Mugenda and Mugenda (2003), a response rate of 70% and above is considered excellent for analysis and generalization in survey research. Therefore, the response rate achieved in this study was deemed satisfactory for data analysis and interpretation.

4.1.1. Descriptive Results of Internal Control Systems

Findings in Table 1 show that LVSWWDA staff overwhelmingly agree that robust internal controls underpin the agency's fraud risk mitigation efforts, with all five items recording mean scores of 4.00 or above on a 5-point scale. "Segregation of duties" scored the highest (Mean = 4.19, SD = 0.95), indicating a strong consensus that dividing

responsibilities effectively reduces opportunities for misappropriation. Close behind, respondents affirmed that "the organization has effective internal controls in place" (Mean = 4.10, SD = 0.98) and that "internal audits are conducted regularly" (Mean = 4.04, SD = 1.00), underscoring the perceived regularity and comprehensiveness of audit cycles. Clear fraud reporting and investigation policies also received strong support (Mean = 4.03, SD = 1.03), suggesting confidence in the agency's mechanisms for detecting and addressing irregularities. Finally, the practice of routinely reviewing and updating control systems (Mean = 4.00, SD = 1.01) reflects an appreciation for continuous improvement. Although standard deviations around 1.0 reveal some variation in experience or awareness—perhaps between departments or tenure levels—the consistently high means signal that internal control systems are widely viewed as a critical foundation for preventing and combating fraud within LVSWWDA.

Table 1: *Internal Control Systems*

Statement	Mean	Std. Dev.
The organization has effective internal controls in place.	4.10	0.98
Segregation of duties is implemented to prevent fraud.	4.19	0.95
Internal audits are conducted regularly.	4.04	1.00
There is a clear policy for reporting and investigating fraud.	4.03	1.03
The organization regularly reviews and updates internal control systems.	4.00	1.01

4.1.2. Descriptive Results on Regulatory Framework

Findings in Table 2 reveal that compliance with anti-fraud regulations is perceived most strongly (Mean = 4.23, SD = 0.91), followed by staff awareness of relevant fraud prevention laws (Mean = 4.10, SD = 1.00) and regular external oversight (Mean = 4.03, SD = 1.04). Respondents also view the existing regulatory frameworks as largely adequate to curb fraud risks (Mean = 4.00, SD = 1.06), while enforcement of penalties, though still positive, scored slightly lower (Mean = 3.93, SD = 1.09). The relatively consistent standard deviations (around 1.0) suggest some variability in individual perceptions, but overall the data indicate that LVSWWDA's regulatory environment is considered a key strength in its fraud risk mitigation efforts.

Table 2: *Regulatory Framework*

Statement	Mean	Std. Dev.
The organization complies with existing anti-fraud regulations.	4.23	0.91
There is regular oversight by external regulatory bodies.	4.03	1.04
Staff are aware of relevant fraud prevention laws and policies.	4.10	1.00
Regulatory frameworks are adequate to curb fraud risks.	4.00	1.06
Regulatory penalties for fraud are effectively enforced.	3.93	1.09

4.1.3. Descriptive Results on Fraud Risk Mitigation

Findings in Table 3 show that LVSWWDA's fraud detection mechanisms are rated very highly (Mean = 4.17, SD = 0.92), closely followed by improved staff fraud awareness (Mean = 4.10, SD = 0.99) and the existence of a formal fraud risk assessment process (Mean = 4.06, SD = 1.02). Respondents also agree that fraud response strategies are both effective and timely (Mean = 4.03, SD = 1.07) and that overall cases of fraud have declined in recent years (Mean = 4.02, SD = 1.04). The relatively tight standard deviations suggest broadly shared positive perceptions of the agency's fraud risk mitigation efforts.

Table 3: *Fraud Risk Mitigation*

Statement	Mean	Std. Dev.
The organization has effective fraud detection mechanisms.	4.17	0.92
Cases of fraud have reduced in recent years.	4.02	1.04
Fraud awareness among staff has improved.	4.10	0.99
There is a formal process for fraud risk assessment.	4.06	1.02
Fraud response strategies are effective and timely.	4.03	1.07

4.1.4. Correlation Analysis

Correlation analysis measures the strength and direction of the linear relationship between two variables. ternal control systems correlate strongly with regulatory frameworks ($r = 0.68$, $p < 0.01$), indicating that organizations with rigorous duty-segregation, audits, and control updates also tend to maintain robust compliance and enforcement policies. Even more strikingly, fraud risk mitigation is very highly associated with both internal controls ($r = 0.75$, $p < 0.01$) and regulatory frameworks ($r = 0.77$, $p < 0.01$). In other words, enhancements in either internal control mechanisms or external regulatory oversight are each closely linked to more effective fraud detection, reduced incidents, and timelier response strategies—underscoring the need for a dual focus on strong in-house controls and solid external governance to minimize fraud risk.

Table 4: *Correlation Analysis*

Variable	Internal Control Systems	Regulatory Framework	Fraud Risk Mitigation
Internal Control Systems	1.000		
Regulatory Framework	0.68**	1.000	
Fraud Risk Mitigation	0.75**	0.77**	1.000

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

4.1.5. Regression Analysis

To further explore the influence of internal control systems, regulatory frameworks, on fraud risk mitigation, a multiple regression analysis was conducted. This analysis helps in understanding the extent to which these independent variables predict the dependent variable, fraud risk mitigation.

Table 5: *Model Summary*

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
Model 1	0.85	0.72	0.70	0.45

The coefficient of determination ($R^2 = 0.72$) shows that 72% of the variance in fraud risk mitigation can be explained by the independent variables (internal control systems, regulatory framework,). This suggests a strong relationship between the predictors and the outcome variable.

Table 6: *ANOVA Results*

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	105.20	4	26.30	32.64	0.000
Residual	40.08	92	0.42		
Total	**145.28**	**96**			

The ANOVA table reveals that the regression model is statistically significant ($F = 32.64$, $p = 0.000$), indicating that the independent variables jointly have a significant effect on fraud risk mitigation.

Table 7: *Regression Coefficients*

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Internal Control Systems	0.35	0.07	0.30	5.18	0.000
Regulatory Framework	0.28	0.07	0.25	4.01	0.000

Internal Control Systems ($B = 0.35$, $p = 0.000$): The unstandardized coefficient (B) of 0.35 suggests that a one-unit increase in the internal control systems increases fraud risk mitigation by 0.35 units. According to Gikonyo (2018), well-established internal control systems, such as regular audits, segregation of duties, and strong oversight, have a significant positive impact on mitigating financial fraud. This aligns with the current study's findings, highlighting internal controls as an essential factor for prevention of fraud.

Regulatory Framework ($B = 0.28$, $p = 0.000$): The unstandardized coefficient ($B = 0.28$) means that an increase in regulatory framework strength results in a 0.28 unit increase in fraud risk mitigation. Mwangi and Kamau (2020) emphasize the role of regulatory frameworks in ensuring compliance and creating a legal structure for fraud prevention. Similarly, Munyiri et al. (2018) argued that regulatory compliance directly impacts the effectiveness of fraud risk management.

5.1. Conclusion

The study concluded that internal control systems are a fundamental pillar for fraud risk mitigation at LVSWWDA. Effective internal controls, such as segregation of duties, regular audits, and clear fraud reporting policies, play a crucial role in preventing and detecting fraud. The study reinforced the view that a well-structured internal control framework not only deters fraudulent activities but also ensures that any detected fraud is promptly addressed. This highlights the importance of robust internal controls in creating a fraud-resistant organizational environment. The regulatory framework was concluded to be a significant determinant in fraud risk mitigation. Adherence to anti-fraud regulations, coupled with oversight from external regulatory bodies, contributes to a culture of compliance and accountability within the organization. Furthermore, the awareness of staff regarding relevant fraud laws and the enforcement of regulatory penalties were found to be essential in deterring fraudulent activities. This reinforces the idea that a strong regulatory environment is essential for reducing fraud risk within public organizations.

6.1. Recommendations

LVSWWDA should strengthen its internal control systems by adopting the COSO framework to ensure robust control activities, risk assessment, and continuous monitoring. This includes enforcing segregation of duties, conducting regular reconciliations, implementing audit trails, and ensuring all staff are adequately trained in fraud awareness and control procedures. The agency should ensure full compliance with the Public Finance Management Act, 2012, and Public Procurement and Asset Disposal Act, 2015. It should also advocate for stricter enforcement of regulatory provisions through enhanced collaboration with oversight bodies like the Auditor General, EACC, and the Public Procurement Regulatory Authority (PPRA). Periodic reviews and updates of internal policies to align with legal requirements are essential.

LVSWWDA should institutionalize forensic auditing as part of its internal audit function. This includes training auditors on forensic techniques such as data analytics, computer-assisted audit tools (CAATs), and digital forensics. The agency should also establish a forensic audit unit or seek external forensic expertise during high-risk or complex investigations.

6.2. Further Study Recommendations

This study primarily focused on the relationship between forensic auditing and fraud risk mitigation within the Lake Victoria South Water Works Development Agency (LVSWWDA). While it provided meaningful insights, several areas remain open for further exploration. Future research could consider conducting similar studies across a broader range of state corporations or counties within Kenya to allow for comparative analysis and enhance the generalizability of findings.

References

Apostolou, B. A., & Schneider, A. (2001). The role of internal controls in preventing fraud in large organizations. *Journal of Accounting and Public Policy*, 20(2), 117–131.

Cohen, J., & Wooten, R. (2011). Regulatory frameworks and fraud prevention in U.S. corporations. *Journal of Business Ethics*, 103(2), 277–295.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.

Ethics and Anti-Corruption Commission (EACC). (2021). *Annual Report 2020/2021*. Nairobi: Government of Kenya.

Institute of Certified Public Accountants of Kenya (ICPAK). (2019). *Survey on the Status of Financial Management in State Corporations in Kenya*. Nairobi: ICPAK.

Ketz, J. E. (2003). Sarbanes-Oxley and its impact on internal controls. *Journal of Accountancy*, 196(4), 63–72.

Krishnan, G. (2005). The impact of internal controls on fraud prevention in financial institutions. *Journal of Banking and Finance*, 29(4), 971–990.

Makworo, J. A., & Kanyingi, M. K. (2013). The effectiveness of internal control systems in mitigating fraud in Kenya's state corporations. *Kenya Journal of Public Finance and Management*, 6(2), 31–45.

Mutunga, A. (2017). Internal control systems and fraud risk mitigation in public institutions in Nairobi. *Kenya Journal of Public Administration and Governance,* 23(2), 112–128.

Mwangi, S. (2020). Resource allocation and fraud risk mitigation in state corporations in the Lake Region of Kenya. *Journal of East African Public Policy*, 7(1), 49–64.

Nguyen, V. (2014). Internal control systems and fraud prevention in the Ugandan public sector. *Uganda Journal of Governance,* 10(2), 66–81.

Obiero, M. (2017). The role of regulatory frameworks in fraud prevention in Kenya's public sector. *Public Administration and Development Journal*, 5(3), 88–103.

Public Finance Management Act. (2012). Nairobi: Government of Kenya.

Public Procurement and Disposal Act. (2015). Nairobi: Government of Kenya.

Schwartz, S. (2009). Regulatory frameworks and fraud prevention in the UK financial sector. *Journal of Financial Regulation*, 22(1), 89–101.

Sibanda, N. (2016). The effectiveness of regulatory frameworks in combating fraud in South Africa's state-owned enterprises. *South African Journal of Corporate Governance*, 12(2), 45–63.

World Bank. (2019). *Enhancing governance in public corporations in emerging economies*. World Bank Publications.

World Bank. (2020). *Public sector governance and accountability series: Corruption and fraud in Africa*. World Bank Group.